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SIR C. R. REDDY COLLEGE OF ENGINEERING

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3.3.2 Number of books and chapters in edited volumes / books published, and papers published in national/international conference-proceedings per teacher during last five years

Name of the teacher	Title of the Book/ Chapters Published	Title of the Paper	Title of the proceedings of the conference	Year of publication	ISBN/ ISSN number of the proceeding	Whether at the time of publication Affiliating InstitutionWas same Yes/NO	Name of the publisher
2022							
J.S.V. Gopala Krishna	Python Experiments for Mechanical Engineering	N/A	N/A	2022	978-81-947453-3-4	Yes	S.S. Publications, Repalle

S.K.Chaitanya.R	N/A	Sentiment Analysis using deep learning for use in recommendation systems of various public media applications	2023 International Conference on Sustainable Computing and Smart Systems	2022	978-1-6654-7971-4	Yes	IEEE
Vahiduddin Shariff	N/A	A Generalized Model for Identifying Fake Digital Images through the Application of Deep Learning	International Conference on Electronics and Sustainable Communication Systems (ICESC 2022)	2022	978-1-6654-7971-4	Yes	IEEE
T N S Koti Mani Kumar	N/A	An Adaptive Load Balancing Technique for Multi SDN Controllers	Proceedings of the International Conference on Augmented Intelligence and Sustainable Systems (ICAISS-2022)	2022	978-1-6654-8962-1	Yes	IEEE
T. Usha Rani	N/A	Region-based Convolutional Neural Networks with IoT-based Alzheimer's disease detection and classifications	IEEE North Karnataka Subsection Flagship International Conference(IEEE NKCon-2022)	2022	978-1-6654-5342-4	Yes	IEEE

Y.Anjani	N/A	Region-based Convolutional Neural Networks with IoT-based Alzheimer's disease detection and classifications	IEEE North Karnataka Subsection Flagship International Conference(IEEE NKCon-2022)	2022	978-1-6654-5342-4	Yes	IEEE
M. Siva Ganesh	N/A	An Adaptive Load Balancing Technique for Multi SDN Controllers	Proceedings of the International Conference on Augmented Intelligence and Sustainable Systems (ICAISS-2022)	2022	978-1-6654-8962-1	Yes	IEEE
Dr.N.Sameera	N/A	Design of Load frequency controller using Whale Optimization Algorithm (WOA)	2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), Mysuru, India, 2022	2022	978-1-6654-9790-9	Yes	IEEE
Dr.G.Chamundeswari	N/A	Design of Load frequency controller using Whale Optimization Algorithm (WOA)	2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), Mysuru, India, 2022	2022	978-1-6654-9790-9	Yes	IEEE

K Kotaiah Chowdary	N/A	Design of Load frequency controller using Whale Optimization Algorithm (WOA)	2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), Mysuru, India, 2022	2022	978-1-6654-9790-9	Yes	IEEE
V. S. R. Pavan Kumar. Neeli	N/A	Design of Load frequency controller using Whale Optimization Algorithm (WOA)	2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon), Mysuru, India, 2022	2022	978-1-6654-9790-9	Yes	IEEE
V. Veeraju	Smart Innovation, Systems and Technologies	Weighted Averaging PSO-Based SWT Method of Image Fusion for X-Ray Mammograms	Smart Intelligent Computing and Applications	2022	volume 283	Yes	Springer Link
S.K.Chaitanya.R	N/A	A comparision between shortest path algorithms using Runtime Analysis and Negative edges in Computer Networks	2022 International Mobile and Embedded Technology Conference	2022	978-1-6654-2020-4	Yes	IEEE

Vahiduddin Shariff	N/A	A comparision between shortest path algorithms using runtime analytics and negative edges in computer networks.	2022 International Mobile and Embedded Technology Conference	2022	978-1-6654-2020-4	Yes	IEEE
J. UnniKiran	N/A	A comparision between shortest path algorithms using runtime analytics and negative edges in computer networks.	2022 International Mobile and Embedded Technology Conference	2022	978-1-6654-2020-4	Yes	IEEE
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Vahiduddin Shariff	Concepts of Cloud Computing Essentials	N/A	N/A	2022	978-935574025-0	Yes	Walnut Publications

V.S.R.Pavan Kumar.Neeli	N/A	Spotted Hayena optimized PI-PD controller for frequency control of standalone u-Grid Incorporating Electrical vehicles	International Conference on Electronics and Renewable Systems	2022	979-8-3503-4664-0	Yes	IEEE
Dr. N Sameera	N/A	Spotted Hayena optimized PI-PD controller for frequency control of standalone u-Grid Incorporating Electrical vehicles	International Conference on Electronics and Renewable Systems	2022	979-8-3503-4664-0	Yes	IEEE
Rama lakshmi B	Fundamentals of Artificial Intelligence	N/A	N/A	2022	978-93-92153-40-2	Yes	South Asian Academic Publishers
Ajay Kumar Dharmireddy	Lecture Notes in Electrical Engineering	Rad-Hard Model SOI FinTFET for Spacecraft Application	Advances in Micro-Electronics, Embedded Systems and IoT	2022	volume 838	Yes	Springer Link

Sk Chan Basha	N/A	Spotted Hayena optimized PI-PD controller for frequency control of standalone u-Grid Incorporating Electrical vehicles	International Conference on Electronics and Renewable Systems	2022	979-8-3503-4664-0	Yes	IEEE
M. Vijaya Raghavendra	N/A	Spotted Hayena optimized PI-PD controller for frequency control of standalone u-Grid Incorporating Electrical vehicles	International Conference on Electronics and Renewable Systems	2022	979-8-3503-4664-0	Yes	IEEE
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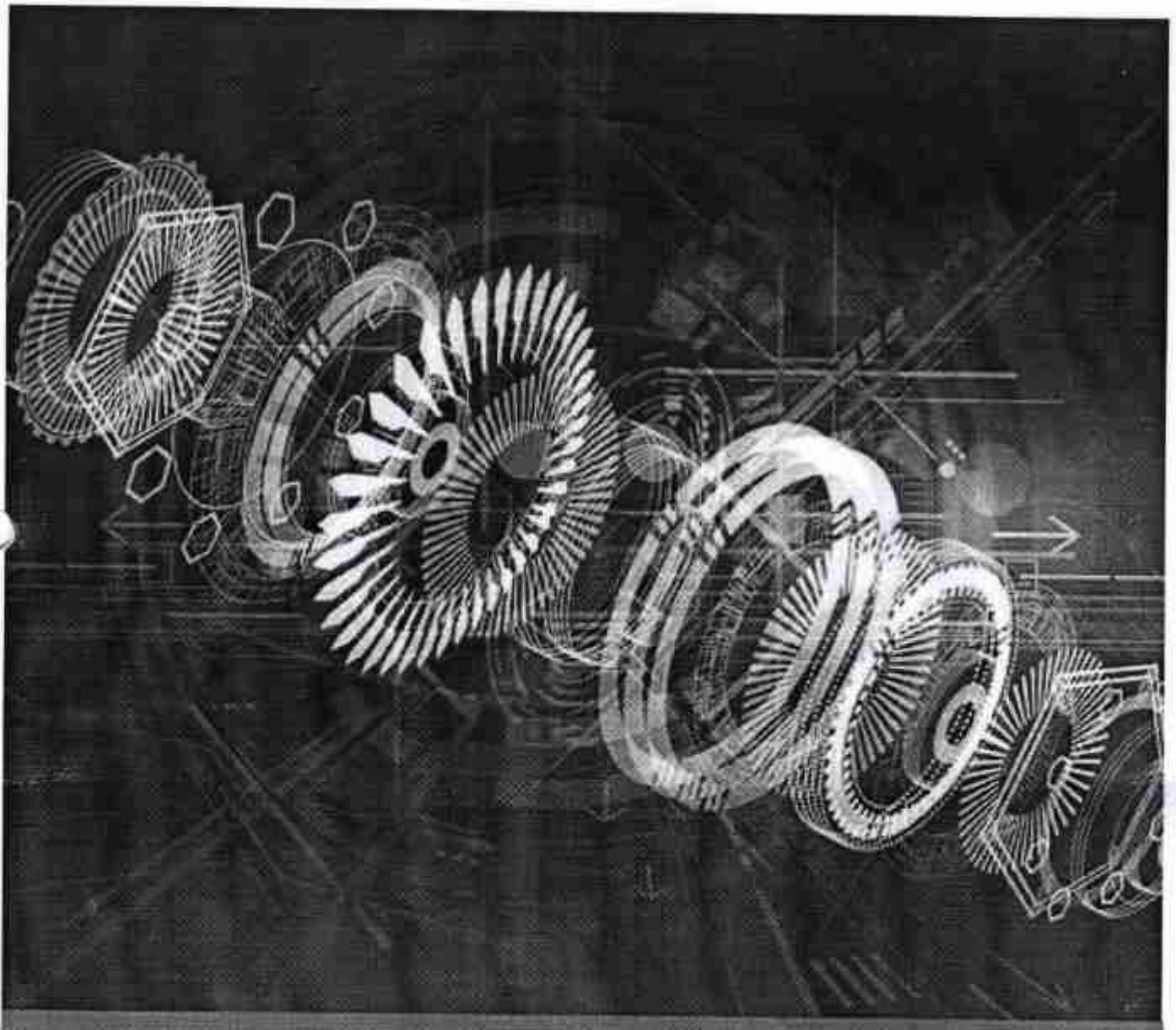

PYTHON EXPERIMENTS

For Mechanical Engineers

ISBN: 978-81-947453-3-4

KATTUPALLI SUDHAKAR Dr MD ABID ALI JSV GOPALA KRISHNA

CONTENTS

Sentiment Analysis using deep learning for use in recommendation systems of various public media applications

Publisher: IEEE

Karuna Arava ; Rudraraju Sri Krishna Chaitanya ; Shaik Sikindar ; S Phani Praveen ; Swapna D All Authors

Abstract: Sentiment Analysis is a method of analyzing text and extracting opinions from it. It's also known as emotion or opinion extraction, and it's part of the machine learning ... **View more**

Metadata

Abstract:
Sentiment Analysis is a method of analyzing text and extracting opinions from it. It's also known as emotion or opinion extraction, and it's part of the machine learning as well as data mining categories. There are numerous ways to convey one's sentiments. It can be articulated in a variety of ways, such as through feelings, making judgments, or expressing one's vision or insight. Sentiment investigation is the act of detecting, recognizing, and categorizing a user's emotion or view for any service, such as movies, product issues, events, or any other attribute that can be good, negative, or neutral. This analysis is based on social communication channels such as websites that included ratings, forum conversations, blogs, micro blogs, Twitter, and other social media platforms. The important goal of suggested system is to improvise accuracy and to generate recommendation system using deep learning algorithms.

Published in: 2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC)

Date of Conference: 17-19 August 2022

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Date Added to IEEE *Xplore*: 19 September 2022

Publisher: IEEE

ISBN Information:

Conference Location: Coimbatore, India

Contents

I. Introduction

People are increasingly utilizing social networking platforms to express their opinions and thoughts on topic such as daily life, business, education and fame. On social media channels, people shared both favorable and negative opinions. If sentiment assessment is utilized, the customer will be able to grasp the comment on the item before purchasing items. The way people express their views and beliefs has evolved in the age of the Internet [1]. Blog entries, social media, internet forums,

A Generalized Model for Identifying Fake Digital Images through the Application of Deep Learning

Publisher: IEEE

Karuna Arava ; Chiranjeevi Paritala ; Vahiduddin Shariff ; S Phani Praveen ; A Madhuri All Authors ...

Abstract: Digital photography usage plays a major role in today's daily communication. Digital picture modification and tampering have become a lot easier because of enhanced techn... **View more**

Metadata

Abstract:

Digital photography usage plays a major role in today's daily communication. Digital picture modification and tampering have become a lot easier because of enhanced technology in photo editing. The public's perception, political views, and police investigations are all influenced by the manipulation of photographs. Forgery or tampering of digital photograph can be done by numerous techniques such as image splicing, copy-move, JPEG compression, light inconsistencies, retouching, etc. Every manipulation technique will leave some traces after forgery and with the help of those traces detection of forgery can be done by forensics. Digital forensics faces difficulty in identifying the authenticity of such digital images. Though manipulation of a single image is done by applying numerous techniques, traces are erased by using post-processing. Many approaches are proposed for image forgery detection by using any one of the tampering techniques (like copy-move, splicing, etc.). In the real–world scenario a universal model is recommended for detecting multiple manipulation operations on a single image.This paper aims to help detect forgery more effectively in digital images even with multiple tampering techniques used to forge one single image using deep learning techniques. Deep learning techniques take a large set of original and tampered images for forgery detection. This model is a self-learned model which differentiates the two classes of authentic and forgery images by extracting hidden features. The experiment results of the proposed approach will illustrate the model's accuracy and efficacy.

Published in: 2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC)

Date of Conference: 17-19 August 2022

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An Adaptive Load Balancing Technique for Multi SDN Controllers

Publisher: IEEE

S Phani Praveen ; Pappula Sarala ; T N S Koti Mani Kumar ; Siva Ganesh Manuri ; V Sai Srinivas ; D Swapna All Authors

Abstract: Software-Defined Networking (SDN) has created distributed controllers to partition the entire network into distinct domains utilizing numerous physically scattered but lo... **View more**

▸ **Metadata**

Abstract:

Software-Defined Networking (SDN) has created distributed controllers to partition the entire network into distinct domains utilizing numerous physically scattered but logically centralized controllers in recent years. SDN enables more flexible network management by separating control and data planes. Multiple controllers improve the scalability and accessibility of a solitary centralized controller, but there is no flexible mechanism for controller load balancing. This study proposes an approach of multiple SDN controllers for dynamic load balancing. The proposed method can automatically transfer the load from the heavy load controller to the light load controller depending on the load condition of each controller. The parameters used in this study to estimate the performance of a dynamic load balancing system are response time, throughput, and resource consumption. Tests with projectors have demonstrated that this system can automatically distribute the load to each controller, saving load balancing time.

Published in: 2022 International Conference on Augmented Intelligence and Sustainable Systems (ICAISS)

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Date Added to IEEE *Xplore*: 16 January 2023

Publisher: IEEE

▸ **ISBN Information:**

Conference Location: Trichy, India

Contents

I. Introduction

When Network is encumbered then there is trivial necessity for Load balancing strategies. For mobile consumers, load balancing directly influences application and service accessibility [1]. Load balancing is a strategy to evenly distribute traffic load on two or more links to optimize throughput, throughput, and response times and to avoid congestion on one or other connections [2]. Load balancing tries to maximize resource use by Minimizing reaction time, minimizing throughput, and

Region-based Convolutional Neural Networks with IoT-based Alzheimer's disease detection and classifications

Anjani Yalamanchili ; Dorai, Venkata Sekhar ; G.Vijay Kumar ; Tummala Usha Rani All Authors ...

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It is proposed that more research into the potential of thermal imaging cameras for human recognition be conducted. When visual recognition is difficult, we recommend building 3D facial reconstructions and combining speech to provide a reliable identification read. Given the numerous uses of facial reconstruction, it is critical to investigate how information theory might be used to speed up and optimised the process. Furthermore, our prototype allows us to follow the whereabouts of the individual with AD. Furthermore, our IoT prototype secures the camera photos using steganography, which allows the recipient to decode the original image using a key. Accuracy, precision, and recall were used to assess the performance of the RCNN-PSO proposed system. The experimental analysis showed that the proposed model RCNN-PSO was able to achieve high performance in multiclass classification.

Published in: 2022 IEEE North Karnataka Subsection Flagship International Conference (NKCon)

Date of Conference: 20-21 November 2022

DOI: 10.1109/NKCon56289.2022.10126627

Date Added to IEEE *Xplore*: 26 May 2023

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Conference Location: Vijaypur, India

Contents

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Publisher: IEEE

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ISBN Information:

Conference Location: Trichy, India

Contents

Design of Load frequency controller using Whale Optimization Algorithm (WOA)

Publisher: IEEE

V. S. R. Pavan Kumar. Neeli ; K. Kotaiah Chowdary ; Nerella Sameera ; Ganta Chamundeswari All Authors

Abstract: This research work focuses on drafting a Load frequency controller that is interconnected with a Single area thermal power system for a Hybrid Distributed generation syst... **View more**

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This research work focuses on drafting a Load frequency controller that is interconnected with a Single area thermal power system for a Hybrid Distributed generation system. Whale Optimization Algorithm(WOA), a meta-heuristic, nature inspired optimization method is applied to obtain PID (Proportional-Integral-Derivative) controller's gain value. The efficiency of the dynamic system is observed. The observations are discussed and compared with the efficiencies of other approaches like Harmony search (HS), Flower pollination algorithm (FPA) and Particle swarm optimization (PSO). The proposed system exhibits its robustness in the frequency deviations' profile with settling time. MATLAB R2010a was used to simulate the same.

Published in: 2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon)

Date of Conference: 16-17 October 2022

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ISBN Information:

Conference Location: Mysuru, India

Contents

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Publisher: IEEE

ISBN Information:

Conference Location: Mysuru, India

Contents

I. Introduction

Now-a-days load demand is increasing rapidly because of the speedy growth of population. The regular use of conventional generation sources leads to the shortage with in a limited duration. In this scenario the cost of fuel also increasing rapidly. Keeping it in mind most of the researchers and power generating units thinking for Nonconventional energy based power generation. They are having so many advantages like less cost, clean, bio friendly etc. solar energy and wind energy are the promising application of renewable power generation. Moreover, power output from these two sources is depending upon the weather conditions. Therefore hybrid renewable energy

2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon)

Design of Load frequency controller using Whale Optimization Algorithm (WOA)

1st V. S. R. Pavan Kumar Neeli
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SIR C R Reddy College of Engineering
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4th Ganta Chamundeswari
Department of IT
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Keywords*—Hybrid Distributed generation system, PID controller, Whale optimization algorithm.

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The present paper deals with the interconnection of Hybrid distributed generation system (DG) with a single area thermal power system [4]. In order to mitigate any frequency deviations a controlling action should be necessary to get back the system to normal condition. The LFC problem not only deals with the selection of controller but also in the designing of controller gains [5]. The optimal parameter gain values are obtained by a meta-heuristic technique Whale optimization algorithm, a nature inspired one. This technique can be used to tune gain values of controller. Also the system dynamic performance is compared with other heuristic techniques to describe the superiority of the propose technique.

Following is the important contribution of the work

1. To design a Single area power system interconnected with Distributed generation (DG).
2. To optimize parameters of PI, PID and I controllers using WOA technique, to compare the dynamic performances.
3. To demonstrate the effectiveness found in the following perturbations
   (a) Step-load
   (b) Random-step load

II. CONSTRUCTION OF THE SYSTEM

The Hybrid distributed generation model examined contains Aqua electrolyser, Wind-turbine generator, Fuel cell Solar-PV system, Energy preservation machines and Diesel generator such as Electric vehicle and Battery energy storage system. The total output of DG system is specified as

$$\Delta P_{DG} = P_{WG} + P_{Fc} + P_{Dg} + P_{Sc} - P_{Ac} \pm P_{Bat} \pm P_{EV} \quad (1)$$

Higher order non linear mathematical forms are used in order to simulate the hybrid power system's varying behaviour. However, in general transfer function systems are used to simulate broad scale systems [6]. In this way, 1st order models entitle all the components. The Power system considered for study is shown in Fig. 1.

A. First order model of Wind turbine generator

The Mechanical energy is obtained from the Kinetic energy of wind by the wind turbine generator. The governing equation is represented by

$$P_m = \tfrac{1}{2}\rho A C_p V_m^3 \quad (2)$$

ρ constitutes air density in terms of kg/m^3, A constitutes swept area in terms of m^2, V_m represents wind speed in terms of m/s, C_p the power co-efficient is the function of the tip speed ratio pitch angle of blade λ and β. In this study the linearized and simplified model of wind turbine generator is assumed and is viewed as first order transfer function model which is given below

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2022 IEEE 2nd Mysore Sub Section International Conference (MysuruCon)

Design of Load frequency controller using Whale Optimization Algorithm (WOA)

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Smart Intelligent Computing and Applications, Volume 2 pp 543–552

Weighted Averaging PSO-Based SWT Method of Image Fusion for X-Ray Mammograms

M. Prema Kumar ✉, V. Veer Raju, M. Venkata Subbarao & P. Rajesh Kumar

Conference paper | First Online: 22 May 2022

Part of the Smart Innovation, Systems and Technologies book series (SIST,volume 283)

Abstract

Fusion of medical images always helps the doctor to spot the disease correctly. X-ray mammogram is very useful for detection of malignancy in the breast. In many conditions, distinct X-ray mammogram is not enough to articulate the fine detail present in the breast malignant cells to the doctor. To improve the situation, histogram equalization is selected to improve the eminence of

A Comparison between Shortest Path Algorithms Using Runtime Analysis and Negative Edges in Computer Networks

Publisher: IEEE

T N S Koti Mani Kumar ; UnniKiran Jaladhi ; Sri Krishna Chaitanya Rudraraju ; Vahiduddin Shariff ; Venkata Rami Reddy Ch ; P A Harsha Var... All Authors

Abstract: Irrespective of the network, data is transferred from source to destination in a shortest path. This work investigates about the finest among shortest path algorithms (Di... **View more**

▸ **Metadata**

Abstract:
Irrespective of the network, data is transferred from source to destination in a shortest path. This work investigates about the finest among shortest path algorithms (Dijkstra's and Bellman ford). Data collected form Dijkstra's and Bellman ford runtime analysis done on different system configurations. Using that data, the result of the shortest path algorithms is compared using the support of runtime of Dijkstra's and Bellman ford on different systems. Theoretical and practical implications were discussed.

Published in: 2022 International Mobile and Embedded Technology Conference (MECON)

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DOI: 10.1109/MECON53876.2022.9752035

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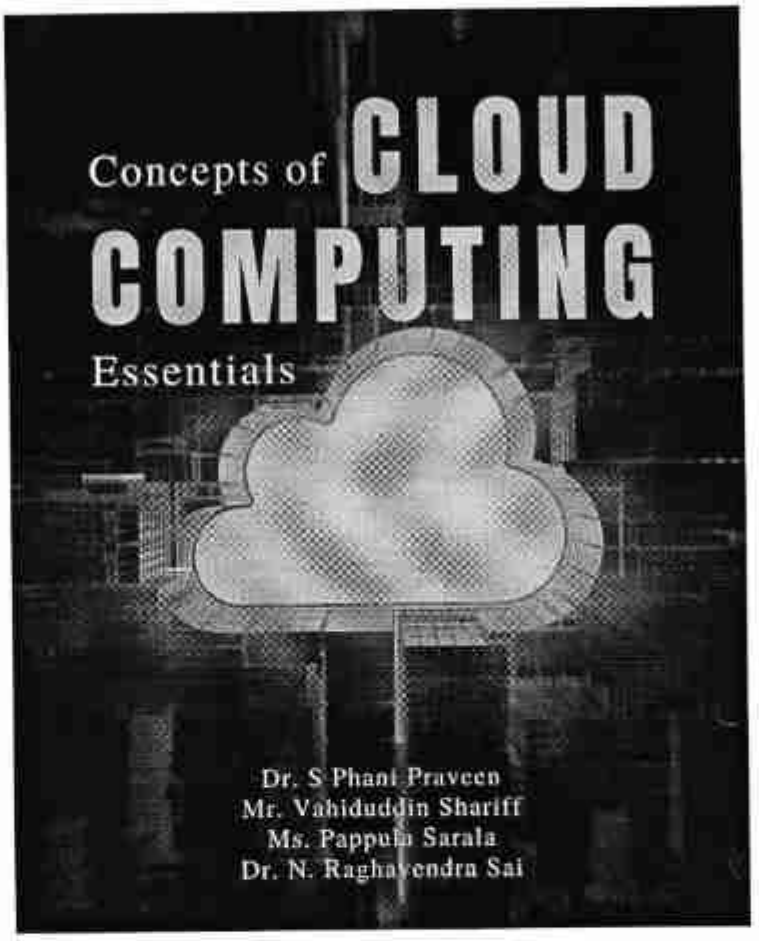

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Cloud computing has created a shift from the use of physical hardware and locally managed software-enabled platforms to that of virtualized cloud-hosted services. As Cloud continues to revolutionize applications in academia, industry, government, and many other fields, the transition to this efficient and flexible platform presents serious theoretical and practical challenges that will often require new approaches and practices in all areas. Comprehensive and timely, Concepts Of Cloud Computing Essentials summarizes progress in state-of-the-art research and offers step-by-step instruction on how to implement it.

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Dr. N. Raghavendra Sai, is an academician with an in-depth knowledge and profound skills set in teaching pedagogy, research, education and administration. His career experience spans around 15 years and, presently he is currently working as Associate Professor in Department of Computer Science and

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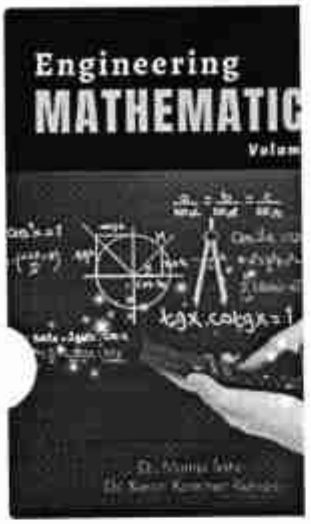

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The cascaded controller strategy, as and when compares to singled loop feedbacked control base strategy, can able to handle multiples and different types of disturbances

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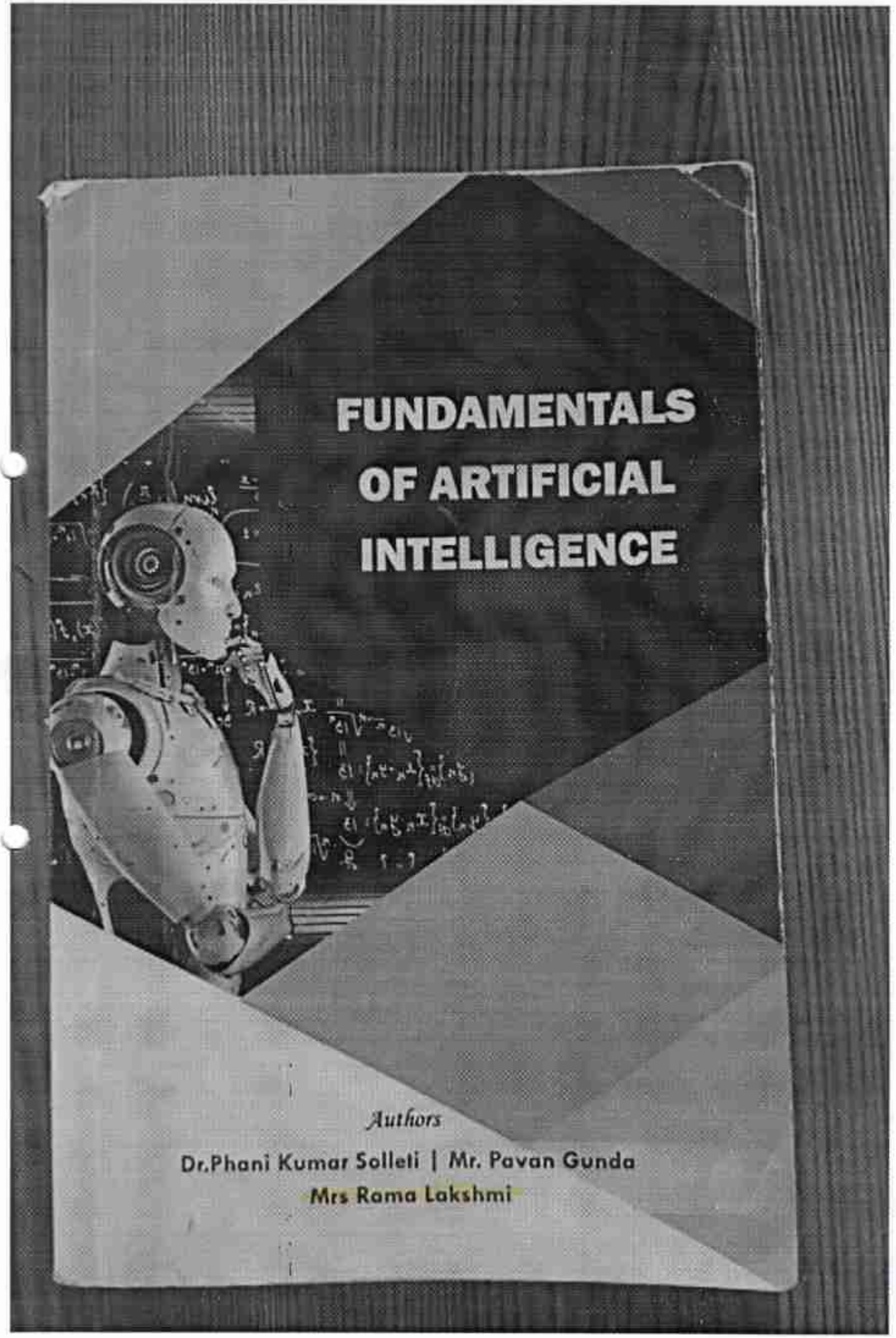
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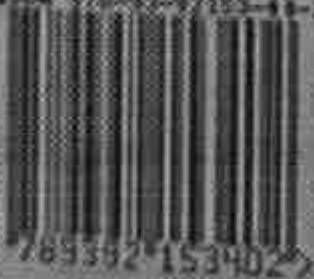

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Rad-Hard Model SOI FinTFET for Spacecraft Application

Ajay Kumar Dharmireddy, Sreenivasa Rao Ijjada, K. V. Gayathri, K. Srilatha, K. Sahithi, M. Sushma, and K. Madhavi

Abstract Radiation-hardened model silicon on insulator fin gate tunnel field effect transistor (SOI FinTFET) devices are used for spacecraft applications to protect from radiation effects. In this, radiation environment revealed that the radiation-induced effect degradation of device performance and also trap charge carriers should not be neglected. Enormous simulations were carried out to examine the production of electron and holes in the gate oxide and to predict the characteristics of device from sub-threshold to inversion region. The gamma radiation model of Sentaurus Technology Computer-Aided Design (TCAD) was used to determine the radiation properties of SOI FinTFET.

Keywords Radiation hardened · Spacecraft applications · Sub threshold region · SOI FinTFET · Gamma radiation · Sentaurus TCAD

1 Introduction

The universe is a huge widespread open space that would be hold on to massive quantities of radiation. Man is always searching for other planets' information and also observe our earth condition with help of satellites. Satellites are used to a clearer sense of information about the universe and solar system. A numeral of automated and worked space satellites have been developed around the world in recent decades. Satellites with millions of electronic circuits are launched into orbit to scan and process the information collected. Most of these electronic devices are intolerant and regularly failed by the effect of cosmic radiation. Due to the widespread development is required to design of radiation tolerant device. The "radiation hardening [1]" of a device refers to the process of fabricating devices that are radiation-resistant. The

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Therefore, the total-generated power by distributed resources in order to-meet the-supply demand-side is

$$P_{Load} = P_{DEG} + P_{WTG} + P_{PV} + P_{MT} + P_{FC} \pm P_{BES} \pm P_{FES} \pm P_{EV} \quad (1)$$

A. PI-PD Controller

The cascaded controller strategy, as and when compares to singled loop feedbacked control base strategy, can able to handle multiples and different types of disturbances

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Spotted Hyena Optimized PI-PD Controller for Frequency control of Standalone μ-Grid Incorporating ElectricVehicles

[1]Dr.V.S.R. Pavan Kumar.Neeli, Associate Professor, Deptof EEE

[2]M. Vijay Raghavendra, Assistant Professor, Dept of EEE

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[5]Dr.N. Sameera, Associate Professor, Deptof IT

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[1] pavanscholar123@gmail.com

***Abstract*: In this current work, one of the maiden approaches was made frequency regulation in a Standalone AC Microgrid (μG) by considering Spotted Hyena optimizer based Cascaded PI-PD controller. These μGrid can be formed by merging some the isolated such as renewable energy resources, wind power and also solar electricity irradiations. Discrepancy any these-sources will influence system frequency and hence-frequency control-theme in MG was challenging issue for all-the researchers. Inspite of these struggling this current paper consider a-Cascaded PI-PD-controllers as secondary frequency controller for the-Standalone μGrid, and a novel Spotted Hyena Optimizer (SHO) is used to tuning and obtaining the controller parameters. The proposed cascaded controllers inspected on a μGrid test system, and robustness is assessed considering -dissimilar variations in load. In order to manifest the effectiveness of the Cascaded PI-PD controller, it-is being compared to some more conventional controller as Proportional Integral (PI), and Proportional Integral and-Derivative (PID) controllers and also to verify the-potency of the-Spotted Hyena optimizer, the-results obtained-by the SHO are been-*compared with other intelligence swarm-techniques*.**

Keywords: PI-PD cascade controller, renewable and green energy sources, standalone microgrid, Spotted hyena optimizer.

I. INTRODUCTION

In life span, developed of isolated off μ-Grids helping in providing electrical powers for more ruralareas, but as conventional ways of supplys electrical power froms a grid is very very high expensive. Consequently, plenty of μGrids are launched for providing electricital power tothoseareas. An μGrid be able to operate at different modes listed as Standalone modes and one more is gridconnected mode. [1]. The distributed generation resources as play a so crucial role at μGrid structure. Up choosing them resources for a standalone μ-Grid-system, the aforemostest elements were then environmental and as economicconstraints [2].

A predominant objective of at this paper to the control frequency the of μGrid structure by using a Spotted Hyena Optimizer (SHO) bases cascaded PI-PD controllers. The all contributions these papers summarily at outlined asfollows:

1. An μGrid formed at established with different more kinds of sources as renewable energy source (RES), wind power generations system, solar energies irradiations systems, μTurbines, diesel systems generations, and also cell system.
2. A cascaded PI-PD controller was developed as a secondaries controller frequency control the μGrid.
3. A novel-Spotted Hyena Optimizer (SHO) algorithm is put forwarded for at tuning of the controllers parameters.
4. Their performance or accomplishment the propose SHO algorithms basecascaded PI-PD controller mainly compared with all some of them conventionall controlled like Piand PIDcontrollers.
5. The efficacy or potency the presented controller illustrated with the consideration of different system variations in μGrid such as changes in load ΔPLand various sensitivity analyses.

II. MODELLING OF STANDALONE μ -GRID

A simplified set for Standalone μ-grid present in Figure1.It consist WTG, PV, MT, FC and also the some of the energy storage device as BES, Flywheels (FES)and Electric vehicles (EV) along with some of other-acloads. As shown inFigure1, the powered electronics device which used at the μ-grid operatios which synchronize an acsources suched as DEG which connects the distributed resources to bus by a rectifying an dc voltaged into ac voltage sources [5]. In addition to this, a converter was considered for-BES-system which operates both-either incharging (ac to dc) and as-well-as-discharging-(dc to ac) modes. Inorderto synthesizea μ-grid, thegeneral and linearizedstatespace modelis essential-andhence-thelinearized-form [6] for the μ-grid systemis presented in Fig.1. All the generating sources as represented in single order transfer function models and the respective values as listed in appendix [12].

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A. PI-PD Controller

The cascaded controller strategy, as and when compares to singled loop feedbacked control base strategy, can able to handle multiples and different types of disturbances

3.3.2 Number of books and chapters in edited volumes / books published, and papers published in national/international conference-proceedings per teacher during last five years

Name of the teacher	Title of the Book/ Chapters Published	Title of the Paper	Title of the proceedings of the conference	Year of publication	ISBN/ ISSN number of the proceeding	Whether at the time of publication Affiliating InstitutionWas same Yes/NO	Name of the publisher
2021							
Dr M Krishna	N/A	Identification of Best Cluster from a Datasets Using Hybrid Hierarchical and Non-Hierarchical Methods.	2nd International Conference on Smart Electronics and Communication (ICOSEC) , organized by Kongunadu College of Engineering and Technology, Trichy, Tamil Nadu	2021	978-1-6654-3368-6	Yes	IEEE

Dr M Krishna	N/A	A Survey on Multimedia Analytics in Security Systems of Cyber Physical Systems and IoT.	2nd International Conference on Smart Electronics and Communication (ICOSEC) , organized by Kongunadu College of Engineering and Technology, Trichy, Tamil Nadu	2021	978-1-6654-3368-6	Yes	IEEE
Dr M Krishna	Basic Python Programming for Beginners	N/A	N/A	2021	978-9354720604	Yes	Bluerose Publishers
Dr N Deepak	N/A	Identification of Best Cluster from a Datasets Using Hybrid Hierarchical and Non-Hierarchical Methods.	2nd International Conference on Smart Electronics and Communication (ICOSEC) , organized by Kongunadu College of Engineering and Technology, Trichy, Tamil Nadu	2021	978-1-6654-3368-6	Yes	IEEE
S.Mohan Babu Chowdary	N/A	Identification of Best Cluster from a Datasets Using Hybrid Hierarchical and Non-Hierarchical Methods.	2nd International Conference on Smart Electronics and Communication (ICOSEC) , organized by Kongunadu College of Engineering and Technology, Trichy, Tamil Nadu	2021	978-1-6654-3368-6	Yes	IEEE xplore

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K. VaradaRaj kumar	Basic Python Programming for Beginners	N/A	N/A	2021	978-9354720604	Yes	Bluerose Publishers
S.Jaya Prakash	N/A	An Intelligent Face Detection by Corner Detection using Special Morphological Masking System and Fast Algorithm	2nd International Conference on Smart Electronics and Communication (ICOSEC) , organized by Kongunadu College of Engineering and Technology, Trichy, Tamil Nadu	2021	978-1-6654-3368-6	Yes	IEEE
S.Jaya Prakash	Basic Python Programming for Beginners	N/A	N/A	2021	978-9354720604	Yes	Bluerose Publishers

Dr.G.Chamundeswari	N/A	Unsupervised Learning Approach for Clustering Leaf Images	IOP Conference Series: Materials Science and Engineering	2021	1074 (2021) 012020	Yes	IOP Publishing
P Rajendra Kumar	N/A	Parametric Analysis on Heart Disease Prediction using Ensemble based Classification	2021 Fourth International Conference on Electrical, Computer and Communication Technologies (ICECCT)	2021	978-1-6654-1480-7	Yes	IEEE
Dr.M.Veera Kumari	Smart& Intelligent Systems, Book chapter 48	Single and Multi objective optimal Generation Expansion planning with HVDC Systems by using HSDE Algorithm,	Proceedings of SIS 2021	2021	978-981-16-2108-6	Yes	Springer
S.Mohan Babu Chowdary	Advancement In Information Technology	N/A	N/A	2021	979-88-86-84491-3	Yes	Published by Notion press INDIA

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Identification of Best Cluster from a Datasets Using Hybrid Hierarchical and Non-Hierarchical Methods

Publisher: IEEE

Deepak Nedunuri ; S. Mohanbabu Chowdary ; T. Sai Krishna ; Marlapalli Krishna ; Bandlamudi S B P Rani All Authors

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Martapalli Krishna ; S Mohan Babu Chowdary ; P. Nancy ; V. Arulkumar All Authors

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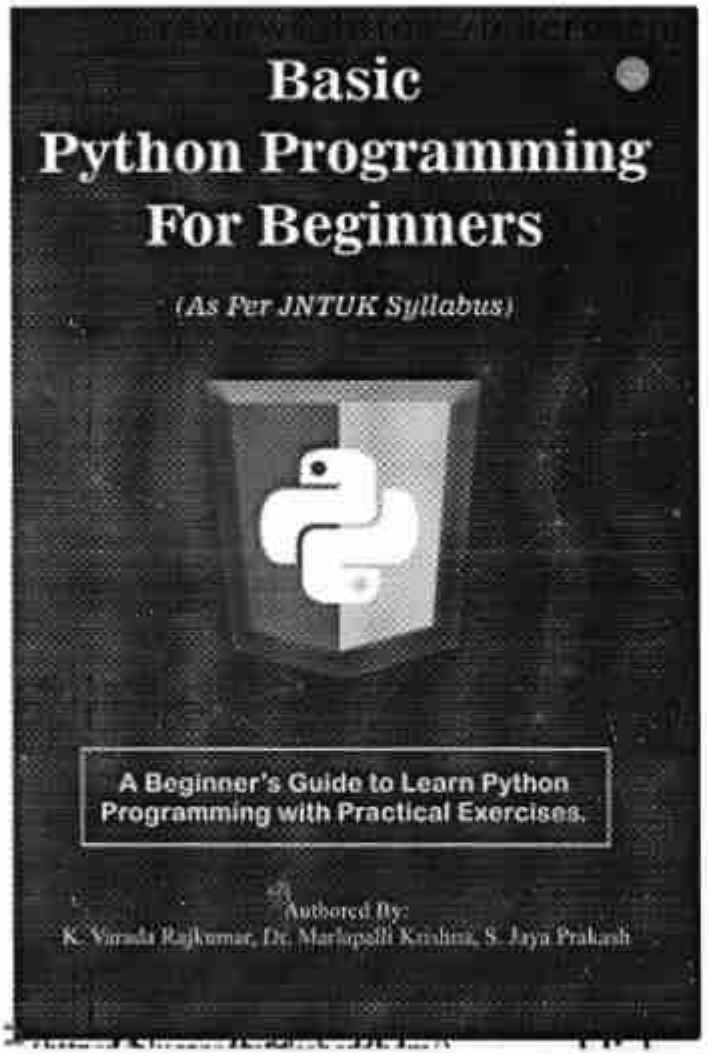
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A Beginner's Guide to Learn Python
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Authored By:
K. Vasudu Rajkumar, Dr. Marlapalli Krishna, S. Jaya Prakash

About the Authors

Mr. K. Varada Rajkumar is currently working as Assistant Professor in the Department CSE, Sir C R Reddy College of Engineering, Eluru, West Godavari district. Andhra Pradesh. He pursuing his Doctoral degree from Koneru Lakshmaiah Education Foundation, Vaddeswaram, AP, India. He has a teaching experience of 10 years in engineering field and published more than 20 research papers in reputed peer reviewed journals. He is an Associate Member of The Institution of Engineers (India) [IEI].

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Basic Python Programming For Beginners

(As Per JNTUK Syllabus)

A Beginner's Guide to Learn Python Programming with Practical Exercises.

Authored By:
K. Varada Rajkumar, Dr. Marlapalli Krishna, S. Jaya Prakash

About the Authors

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An Intelligent Face Detection by Corner Detection using Special Morphological Masking System and Fast Algorithm

Publisher: IEEE

V. Arulkumar ; S. Jaya Prakash ; E.K. Subramanian ; N. Thangadurai All Authors

Abstract: This research study has applied facial recognition techniques using the angle detection algorithm. Also, a fast angle detection algorithm has been used here, but modified... **View more**

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Abstract:

This research study has applied facial recognition techniques using the angle detection algorithm. Also, a fast angle detection algorithm has been used here, but modified it by applying a shielding technique to create a technique related to loud noise. This article describes twelve facial signs that include the corner of the left eye, the corner of the right eye, the left eyebrow, the right eyebrow, the corner of the lip, and the nostril. It consists of two parts; first, a private browsing technique has been performed to filter the image from noise. The proposed method is based on the assumption that an image is available from the front (fully front). Skin areas were first detected using a color-based learning algorithm and six sigma techniques on RGB, HSV, and NTSC scales. Other analyzes involve morphological processing using the detection of the borderline and the detection of the reflection from the light source of the eye commonly referred to as the eye point. In the second step, a fast angle detection algorithm has been used to detect the placeholders on the face. The Fast Angle Finder works on the Angular Response Function (CRF) which is calculated as the minimum change in intensity in all possible directions. Finally, a comparison has been made with other filtering techniques based on the proposed protection techniques. This article has performed different experiments by using the IRIS Face Database, BioID, and the Cohn Canada Database. The recognition rate obtained by the proposed method is appreciable.

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Unsupervised Learning Approach for Clustering Leaf Images

G Chamundeswari[1]

IOP Conference Series: Materials Science and Engineering, Volume 1074, International Conference on Computer Vision, High Performance Computing, Smart Devices and Networks (CHSN 2020) 28th-29th December, Kakinada, India

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DOI 10.1088/1757-899X/1074/1/012020

[1] Research Scholar, JNTU Kakinada, Kakinada, A.P., India

Abstract

With appropriate representation methods, the clustering techniques are found to be efficient with neural networks. The present work aims to propose various feature representation techniques for efficient clustering. The methods used for feature representation in this paper are, a method using random closed set, a method using edge information of input entity, a method that uses Huff transformation and a method that uses boundary moments. A comparative study of these representation methods for clustering the input objects using artificial neural networks, specifically Self-Organizing Map (SOM) is focused.

Parametric Analysis on Heart Disease Prediction using Ensemble based Classification

Publisher: IEEE

Parvathaneni Rajendra Kumar ; Suban Ravichandran ; S. Narayana All Authors

Abstract: Heart disease is a bigger cause of morbidities and mortalities amongst the populace of the world. Predicting of heart disease is observed as a vital subject in clinical d... **View more**

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Abstract:

Heart disease is a bigger cause of morbidities and mortalities amongst the populace of the world. Predicting of heart disease is observed as a vital subject in clinical data investigation. The quantity of data in medical industry is massive. Data mining turned the larger compilation of medical data to information for making knowledgeable predictions and decisions. This research work develops a new heart disease prediction model that includes 3 most important phases viz. "proposed feature extraction, dimensionality reduction and proposed ensemble based classification". At first, the higher and lower statistical features are extracted. Nevertheless, due to "curse of dimensionality" it is necessary to reduce the extracted features, for which "Principal Component Analysis (PCA) is employed. These features are then classified via "Support Vector Machine (SVM), Random Forest (RF), K-Nearest Neighbour (KNN) with optimized Neural Network (NN)". Moreover, the training of NN is done by S-CDF via fine-tuning the optimal weights. Finally, parametric analysis is held to confirm the effectiveness of the developed model.

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Chapter 48
Single and Multi-objective Optimal Generation Expansion Planning with HVDC Systems by Using HSDE Algorithm

Kumari Maddipati Veera and K. Vaisakh

1 Introduction

The optimal generation expansion planning (Optimal Generation Expansion Planning) problem plays a vital role in power system planning to meet the forecasted load demand. During OGEP, outage of existing generators, transformers and transmission lines need to be considered. For planning several constraints like construction constraints, reliability constraints, power flow constraints and security constraints are considered. In OGEP, the objective is to expand the existing generators to serve the growing load demand in the future by satisfying the reliability criteria.

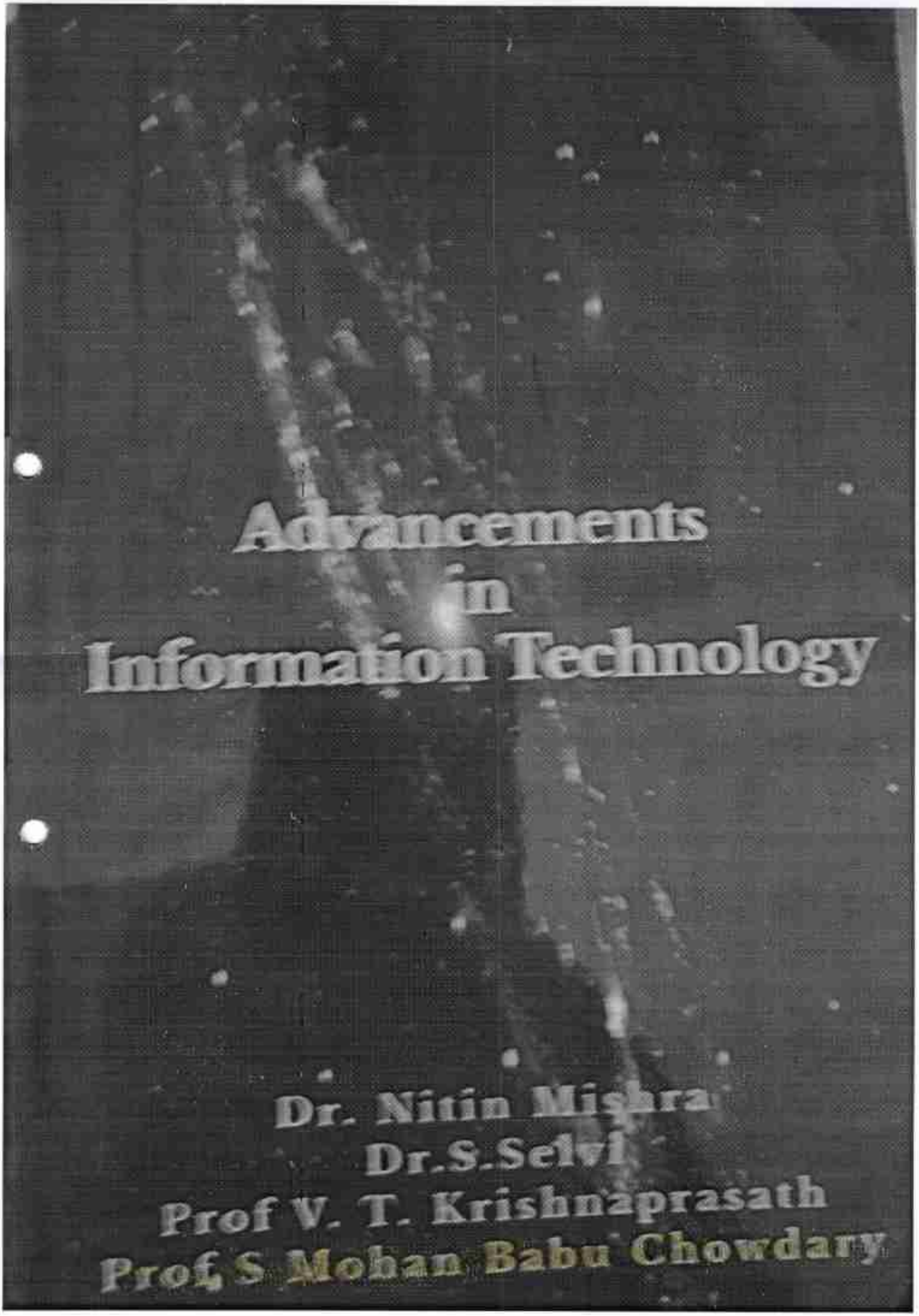
1.1 Literature Survey

The OGEP determines size, place, technology and the time of installing new generating plants to meet the forecasted load demand. As OGEP is a highly constrained, nonlinear, discrete [1, 2] optimization problem, it is a highly challenging problem for the decision-makers. The solution for this GEP problem is obtained by complete enumeration of each possible combination [3–8] in the entire planning horizon. Since 1950, many optimization techniques such as linear programming, integer programming and dynamic programming (DP) are applied to solve these combinatorial optimization problems [9–13]. Habib et al. [14] analyzed utilization of renewable energy with domestic coal in place of import coal and oil in Bangladesh Power System from 2010 to 2030. Also, the modelling of long-term renewable and domestic coal utilization is examined by expansion cost and environmental impacts.

K. Maddipati Veera (✉)
EEE Department, Sir CRR College of Engineering, Eluru, Andhra Pradesh, India

K. Vaisakh
EEE Department, Vishakapatnam, Andhra Pradesh, India

S. Dawn et al. (eds.), *Smart and Intelligent Systems*, Algorithms for Intelligent Systems,
https://doi.org/10.1007/978-981-16-2109-3_49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in
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Dr.S.Selvi
Prof V. T. Krishnaprasath
Prof S Mohan Babu Chowdary

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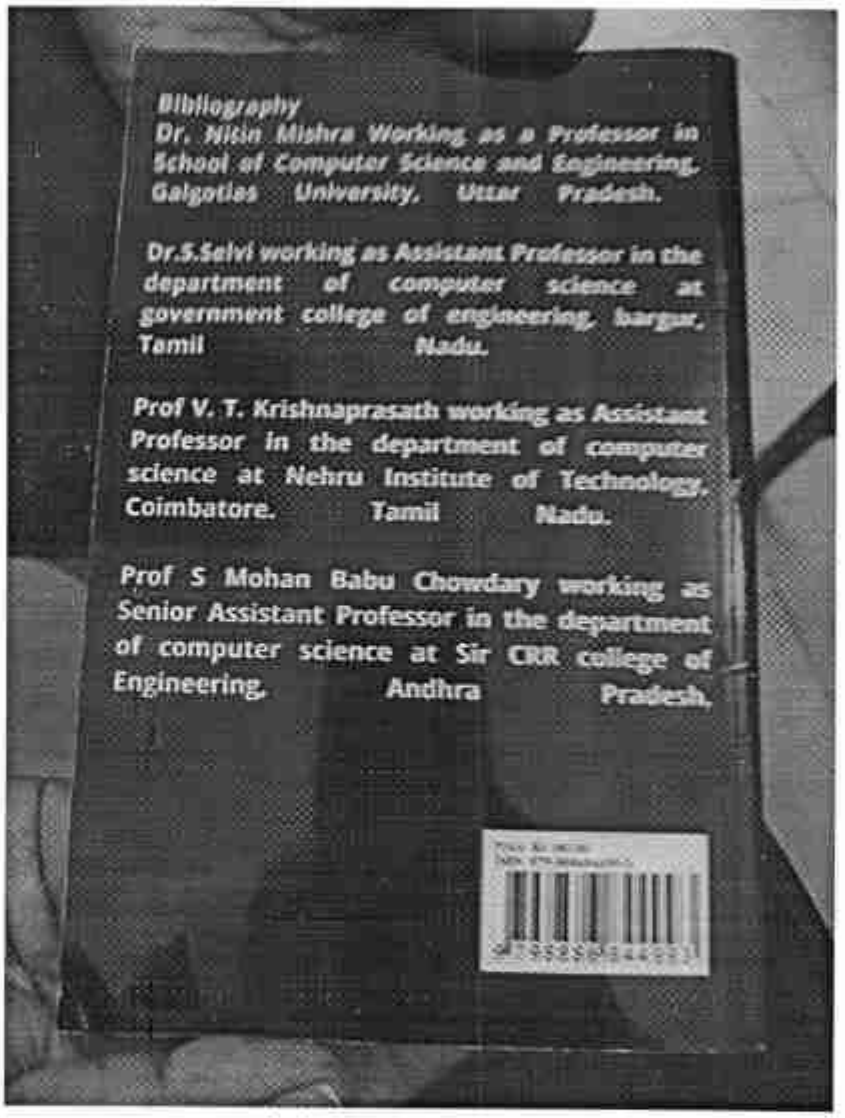
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3.3.2 Number of books and chapters in edited volumes / books published, and papers published in national/international conference-proceedings per teacher during last five years

Name of the teacher	Title of the Book/ Chapters Published	Title of the Paper	Title of the proceedings of the conference	Year of publication	ISBN/ ISSN number of the proceeding	Whether at the time of publication Affiliating Institution Was same Yes/NO	Name of the publisher
2020							
Dr.S.Krishna Rao	Chapter: Novel Theories and Applications of Global Information Resource Management	An Experimental Analysis of Modified EEECARP : An Optimized Cluster-Based Adaptive Routing Protocol for Modern-Secure-Wireless Sensor Networks	Novel Theories and Applications of Global Information Resource Management	2020	978-17-99-8178-88	Yes	IGI Global

Dr M Krishna	Lecture Notes in Networks and Systems	A Review on Image Compression Techniques	Communication Software and Networks	2020	volume 134	Yes	Springer,
Dr M Krishna	Advances in Intelligent Systems and Computing	A Comparatives Study of Protein Kinase Domain Regions for MAPK 1-14	Intelligent System Design	2020	volume 1171	Yes	Springer,
Dr N Deepak	Advances in Intelligent Systems and Computing	A Comparatives Study of Protein Kinase Domain Regions for MAPK 1-14	Intelligent System Design	2020	volume 1171	Yes	Springer,
S.Mohan Babu Chowdary	Advances in Intelligent Systems and Computing	A Comparatives Study of Protein Kinase Domain Regions for MAPK 1-14	Intelligent System Design	2020	volume 1171	Yes	Springer,

P Naga Deepthi	Learning and Analytics in Intelligent Systems	Applications of Network Analysis in Bioinformatics	Advances in Computational and Bio-Engineering	2020	volume 16	Yes	Springer,
V Pranav	Lecture Notes in Networks and Systems	A Review on Image Compression Techniques	Communication Software and Networks	2020	volume 134	Yes	Springer
S.Jaya Prakash	Advances in Intelligent Systems and Computing	A Comparatives Study of Protein Kinase Domain Regions for MAPK 1-14	Intelligent System Design	2020	volume 1171	Yes	Springer
T N S Koti Mani Kumar	A Textbook of Programming in C	N/A	N/A	2020	978-93-89044-22-5	Yes	Notion Press

Dr. B. Madhav Rao	Lecture Notes in Networks and Systems	A Review on Image Compression Techniques	Communication Software and Networks	2020	volume 134	Yes	Springer,
M Veeranjaneyulu	Applied Physics; Fourth Edition	N/A	N/A	2020	9.78819E+12	Yes	VGS Publishers
Sai Charan	Journal of Physics: Conference Series	An Exposition of Speculative and Numerical Analysis of CFST Columns	IOP Conference Series: Materials Science and Engineering	-2020	ISSN 1757-899X	No	IOP Science
G. Srilatha	N/A	Design and Analysis Metamaterial Inspired Wearable Antenna for 2.45GHz ISM Band	Proceedings of the International Conference on Microelectronics, ICM	2020	978-172819664-0	Yes	IEEE xplore

Dr. K.Venkateswara Rao	Intelligent Manufacturing and Energy Sustainability	Effect of tribo layer on the sliding wear behaviour of detonation sprayed alumina- titanium coatings	Smart Innovation, Systems and Technologies	2020	volume 169	Yes	Springer
Dr. S. N. V. Bramareswara Rao	Microelectronics, Electromagnetics and Telecommunications	A Review on Schemes for Interconnecting Microgrids of Urban Buildings	International Conference on Microelectronics, Electromagnetics and Telecommunications	2020	978-981-15-3828-5	Yes	Springer
B.Sambasiva Rao	Lecture Notes in Electrical Engineering	Comparitive Performance Analysis of Active and Resistive Type SFCL in Reducing the Fault Curent	Innovation in Electrical and Electronics Engineering	2020	volume 626	Yes	Springer
L.Vamsi Narasimha Rao	Lecture Notes in Electrical Engineering	Comparitive Performance Analysis of Active and Resistive Type SFCL in Reducing the Fault Curent	Innovation in Electrical and Electronics Engineering	2020	volume 626	Yes	Springer

Ravilla Madhusudan	Lecture Notes in Electrical Engineering	Comparitive Performance Analysis of Active and Resistive Type SFCL in Reducing the Fault Curent	Innovation in Electrical and Electronics Engineering	2020	volume 626	Yes	Springer
G. Ganesh	Lecture Notes in Electrical Engineering	Comparitive Performance Analysis of Active and Resistive Type SFCL in Reducing the Fault Curent	Innovation in Electrical and Electronics Engineering	2020	volume 626	Yes	Springer
Vurla Veerraju	Lecture Notes in Electrical Engineering	Image Fusion of X-ray Mammography Using Weighted Averaging GA-Based SWT Technique	Microelectronics, Electromagnetics and Telecommunications	2020	volume 655	Yes	Springer

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Chapter 12
An Experimental Analysis of Modified EEECARP: An Optimized Cluster-Based Adaptive Routing Protocol for Modern-Secure-Wireless Sensor Networks

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Raghu Institute of Technology, India

ABSTRACT

Designing various energy-saving routing protocols for real-time internet of things (IoT) applications in modern secure wireless sensor networks (MS-WSN) is a tough task. Many hierarchical protocols for WSNs were not well scalable to large-scale IoT applications. Low energy adaptive two-level-CH clustering hierarchy (LEATCH) is an optimized technique reduces the energy-utilization of few cluster heads, but

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Communication Software and Networks pp 271–279

A Review on Image Compression Techniques

Krishna Marlapalli, Rani S. B. P. Bandlamudi, Rambabu Busi, Vallabaneni Pranav & B. Madhavrao

Conference paper | First Online: 04 October 2020

Part of the Lecture Notes in Networks and Systems book series (LNNS,volume 134)

Abstract

With the continuous advances in technology, the bandwidth requirements of a communication network have been increased. But increased pixel size in and gray level resolution in sensor technology and in digital image representation, the increased bandwidth is not satisfying the requirements. Hence image compression becomes a prominent research area. Image compression decreases the number of bits necessary to

Intelligent System Design pp 369–376

A Comparatives Study of Protein Kinase Domain Regions for MAPK 1-14

Deepak Nedunuri, S. M. B. Chowdary, S. Jaya Prakash & M. Krishna

Conference paper | First Online: 11 August 2020

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 1171)

Abstract

Most of the MAPKs activity is to stimulate a wide variety of signals which include mitogens, growth factors, cytokines, T cell antigens, pheromones, UV and ionizing radiations, osmotic stress, heat shock, oxidative stress and various other factors. MAPKs acts on most non-nuclear oncogenes and is found to be liable for growth factors response towards cellular stimuli. MAPK proteins participating in

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International Conference On Computational And Bio Engineering

CBE 2019: **Advances in Computational and Bio-Engineering** pp 79–84

Applications of Network Analysis in Bioinformatics

P. Naga Deepthi & Raju Anitha

Conference paper | First Online: 07 July 2020

Part of the Learning and Analytics in Intelligent Systems book series (LAIS,volume 16)

Abstract

The practice of bioinformatics involves the collection, classification, storage and analysis of biological and biomedical information—using computers. Some of the specific areas in which these processes are applied include genomics and genetics. Also, an example of the specific data targeted by bioinformatics involves genetic codes. This paper has reviewed the concept of network analysis and its application in bioinformatics. Indeed, the process of network analysis has evolved

Communication Software and Networks pp 271–279

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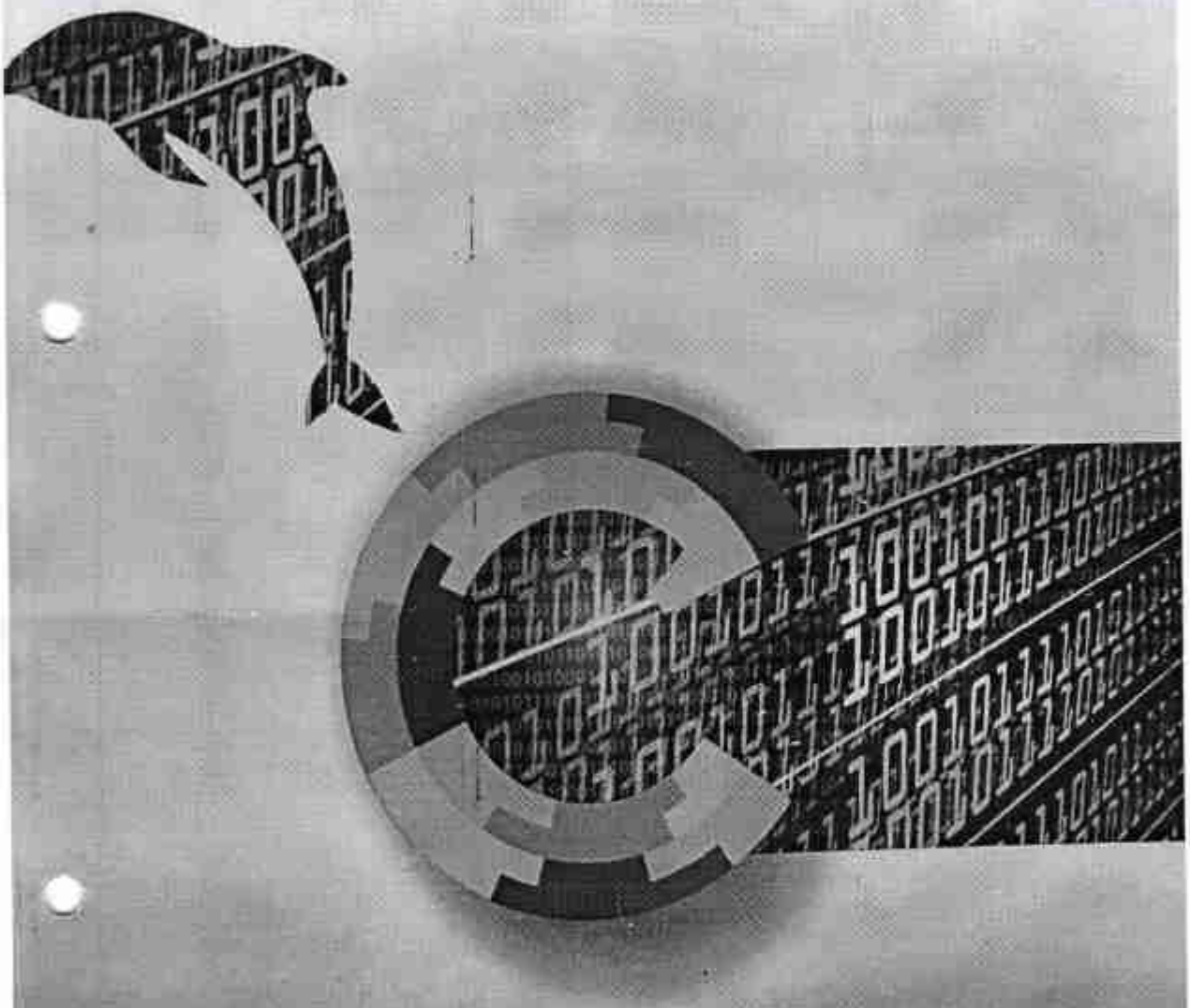

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Mr. T. N. S. Koti Mani Kumar completed his B.Tech in Information Technology and M.Tech in Computer Science and Engineering. He was appointed as Assistant Professor in Department of Computer Science and Engineering at Sir CR Reddy College of Engineering, Eluru, West Godavari district, Andhra Pradesh. He is Microsoft certified in Microsoft Dynamics CRM 2016 customization and configuration (Candidate ID: Ms0615248291). He has 2+ years of industrial experience with .NET technologies using ASP.NET, C# .NET, WCF and MS SQL server 2008 & 2012. He has 3+ years of experience in teaching. His area of interest is in C, Java, Python and Computer Networks.

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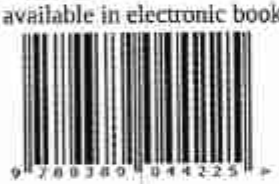

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Dr.D.Thirupathi Naidu, Professor of Physics at Chalapathi Institute of Engineering & Technology,Guntur. Formally he worked as Professor of Physics & Principal in Gayatri Institute of Engineering & Technology, West Godavari District and RNEC, Ongole. He received his Master Degree in Science and Doctoral Degree in Physics on **Spectroscopic investigations of certain lanthanide ions doped mixed alkali borate glasses** from S.V. University, Tirupati.

He has Sixteen years of teaching & research experience and published more than 20 research papers in various reputed International journals and attended number of conferences at national & international level and presented technical papers. He acted as a research supervisor and guided many students in getting their M.Phil and Ph.D Degrees. Apart from teaching, he discharged duties at various capacities and served the students. He has a passion for physics and flair for teaching physics to the students of technology for many years and received laurels from all students.

M.Veeranjaneyulu, working in Sir C.R. Reddy College of Engineering, Eluru. Formally he worked as an Associate professor in physics in Rao & Naidu Engineering College, Ongole, received his M.Sc., B.Ed., Degrees from Nagarjuna University and M.Phil Degree from Andhra University. For the past twenty seven years, he has been rendering his services in enlightening the concepts of Physics to the technical students in the strata of Engineering Physics and to the students at degree level. He has shown his brilliance in Physics at various platforms by presenting papers and by attending various conferences. His conceptual clarity motivates students and inspires them to go for research. He stands as an icon among the teachers of Physics.

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Contents

CHAPTER - 1

Interference

PAPER • OPEN ACCESS

An Exposition of Speculative and Numerical Analysis of CFST Columns

Pala Gireesh Kumar[1], Seethalam Sai Charan[2], S Reshma Sri Mani[3] and Kundeti Nagarjuna[2]

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[2] Assistant Professor, Gudlavalleru Engineering College

[3] Assistant Professor, Ramachandra College of Engineering

Abstract

Owing to the advantages like intense compressive strength, large ductility and enormous energy incorporation, Concrete filled steel tube column system is gaining momentum when set side by side to regular steel or reinforced concrete system. Local buckling is one such major advantage that CFST gives experimental results from various articles has proven that there is an increase in the properties of CFST over normal concrete systems. This paper aims to give brief understanding on the experiments works conducted and numerical results obtained from various articles are discussed. Experimental works exposed to view that circular concrete filled steel tubes were more appropriate than square concrete filled steel tubes. In this paper, nonlinear finite element analysis for concrete filled steel tube is effectuated through varied parameters like concrete infill grade, as short columns with diameter ratio (L/D) not exceeding 4.5 with devoid of slenderness have also been discussed. The past studies divulged that the increment of D/T ratio dwindles the load carrying capacity of

Document details - Design and Analysis Metamaterial Inspired Wearable Antenna for 2.45GHz ISM Band

Proceedings of the International Conference on Microelectronics, ICM

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32nd International Conference on Microelectronics, ICM 2020; Virtual, Aqaba; Jordan; 14 December 2020 through 18 December 2020; Category numberCFP20473-ART; Code 166845

Design and Analysis Metamaterial Inspired Wearable Antenna for 2.45GHz ISM Band(Conference Paper)

Sri Latha, G., Raju, G.S.N., Sunny Dayal, P.A.

[a]Sir Crrce, Ece, Eluru, India
[b]Cutm, Ece, Vizianagaram, India

Abstract

A metamaterial (MTM) inspired wearable antenna for 2.45GHz ISM band is presented in this paper. The radiating element is designed using a rectangular patch having n shaped slot, this structure resembles metamaterial like geometry. The strip line for feed is altered to match the impedance for better performance. The proposed antenna design consists partial ground and four metamaterial unit cells under the radiating element in the same plane as ground. The MTM unit cells are designed using square shaped patches with inverted U shaped slots. The metamaterial are placed on top of the jeans cloth. The MTM unit cells helped in achieving the reduction of the specific absorption rate (SAR). The performance of the proposed antenna is presented using comparative simulated analysis like reflection coefficient, VSWR, radiation patterns and other antenna parameters for without MTM and with MTM cases. The suitability of the antenna for wearable application presented with the help of simulated analysis comparison for off-body and on-body conditions. © 2020 IEEE.

Author keywords

2.45GHz ISM band | Metamaterial | SAR | Wearable

Indexed keywords

Engineering controlled terms: Directional patterns (antenna) | Metamaterial antennas | Metamaterials | Microelectronics

Engineering uncontrolled terms: 2.45GHz ISM bands | Antenna parameters | Design and analysis | Metamaterial (MTM) | Radiating elements | Simulated analysis | Specific absorption rate | Wearable applications

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Sri Latha, G.; Sir Crrce, Ece, Eluru, India;

Effect of Tribo-layer on the Sliding Wear Behavior of Detonation Sprayed Alumina–Titania Coatings

P. Uday Chandra Rao, P. Suresh Babu, D. Srinivasa Rao, S. V. Gopala Krishna and K. Venkateswara Rao

Abstract Alumina–Titania composite coatings are excellent candidates for providing protection against abrasive and sliding wear. These coatings have their applications in textile manufacturing components, tooling, components for the chemical industry and electrical insulation due to high wear resistance, toughness, good grindability and corrosion resistance. Al_2O_3–TiO_2 composite powders having TiO_2 from 3 to 40 wt% are deposited on mild steel substrates by advanced detonation spray coating (ADSC) technique, advanced characterization techniques like SEM, FESEM, EDS, XRD, were carried to access the coating characteristics. Tribological behavior of coatings was evaluated under dry sliding wear condition as per ASTM standards, and the results were summarized and correlated with the coating composition.

1 Introduction

Coatings are applied on to material to form a layer by which it enhances the surface properties of the material by acting as composite. Alumina–Titania coatings deposited by thermal spray process have been used to enhance the wear, corrosion resistance, electrical and thermal conductivity as well as elevated temperature

P. Uday Chandra Rao (✉) · S. V. Gopala Krishna · K. Venkateswara Rao
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Microelectronics, Electromagnetics and Telecommunications pp 431–438

A Review on Schemes for Interconnecting Microgrids of Urban Buildings

S. N. V. Bramareswara Rao & Kottala Padma

Conference paper | First Online: 24 June 2020

Part of the Lecture Notes in Electrical Engineering book series (LNEE,volume 655)

Abstract

Interconnected operation of microgrids is one of the prominent solutions to meet the increased demand of electricity by large consumer such as urban buildings. Besides, the present-day urbanization motivations further enhance the power crisis problem. So, this creates major burden on the utility grid and consequently leading to grid failures. So, these buildings can be integrated to share their generation and load appropriately.

Innovations in Electrical and Electronics Engineering pp 473–484

Comparative Performance Analysis of Active- and Resistive-Type SFCL in Reducing the Fault Current

G. Ganesh, Ravilla Madhusudan, L. Vamsi Narasimha & B. Sambasiva Rao

Conference paper | First Online: 24 March 2020

Part of the Lecture Notes in Electrical Engineering book series (LNEE,volume 626)

Abstract

Nowadays, an efficient alternative to expensive enhancement of protective equipment is superconducting fault current limiters (SFCLs), which provide economic remedies to intercept the existing protective devices in the power system from being severely affected by excessive currents. In this paper, resistive- and active-type SFCLs are applied separately to reduce the fault current. The

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Microelectronics, Electromagnetics and Telecommunications pp 641–650

Image Fusion of X-ray Mammography Using Weighted Averaging GA-Based SWT Technique

M. Prema Kumar ✉, V. Veer Raju & P. Rajesh Kumar

Conference paper | First Online: 24 June 2020

Part of the Lecture Notes in Electrical Engineering book series (LNEE,volume 655)

Abstract

Nowadays, image fusion of medical images plays a crucial role and enables the radiologists to diagnosis the diseases. X-ray mammogram has become a universal practice for the identification of cancer cells in the breast. Sometimes, a single X-ray mammography is not alone sufficient to express full details about breast cancer to the radiologist. To overcome this problem, equalization of the histogram is chosen to improve the superiority of

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3.3.2 Number of books and chapters in edited volumes / books published, and papers published in national/international conference-proceedings per teacher during last five years

Name of the teacher	Title of the Book/ Chapters Published	Title of the Paper	Title of the proceedings of the conference	Year of publication	ISBN/ ISSN number of the proceeding	Whether at the time of publication Affiliating InstitutionWas same Yes/NO	Name of the publisher
2019							
Dr. ASrinivasa Reddy	Advances in Intelligent Systems and Computing	Shuffled Differential Evolution Algorithm Based Combined Heat and Power Emission Dispatch	Computational Intelligence in Pattern Recognition	2019	978-981-13-9041-8	Yes	Springer

M Veeranjaneyulu	A Textbook of Engineerijng Physics; Sixth Edition	N/A	N/A	2019	97881937594-1-7	Yes	VGS Publishers
J.S.V. Gopala Krishna	Journal of Physics: Conference Series	Quick Certification Cellular phone IP Contrasted to Ranked Cellular phone IP	International conference on computer vision and machine learning	2019	Vol.1228	Yes	IOP Publishing
T. Rama Krishna	Lecture Notes in Mechanical Engineering	Effects of Post-weld Heat Treatment on Microstructure and Mechanical Behavior of Friction Stir Welded Thick Section Al–Zn–Mg–Cu Alloy	Advances in Engineering Design	2019	978-981-13-6469-3	Yes	Springer
Vahiduddin Shariff	Journal of Physics: Conference Series	New distributed routing algorithm in wireless network models	International conference on computer vision and machine learning	2019	Vol.1228	Yes	IOP Publishing

Sri Ch. Pavan Kumar	Journal of Physics: Conference Series	Experimental Study on Laser Welding of AISI 304 Steel with Design of Experiments Approach	Materials Science and Engineering 577 (2019) 012117	2019	Volume 653,	yes	IOP Publishing
M. MadhavaRao	Journal of Physics: Conference Series	Quick Certification Cellular phone IP Contrasted to Ranked Cellular phone IP	International conference on computer vision and machine learning	2019	Vol.1228	Yes	IOP Publishing
Sri S.V. Gopala Krishna	Journal of Physics: Conference Series	Mechanical characteristics of Al-Al2O3-SiC metal matrix composites made by stir casting technique	Materials Science and Engineering 653 (2019)	2019	Volume 653,	yes	IOP Publishing
D. Srinivasa Rao	Journal of Physics: Conference Series	Providing An Adaptive Setup For Media-Content Sources.	International conference on computer vision and machine learning	2019	1228 012030	Yes	IOP Publishing

Dr N Deepak	Journal of Physics: Conference Series	A Novel Approach To Compress DNA Repetative Sequences In Bioinformatics	International conference on computer vision and machine learning	2019	Vol.1228	Yes	IOP Publishing
Samparthi V S Kumar	Journal of Physics: Conference Series	A Novel Approach To Compress DNA Repetative Sequences In Bio-Informatics	International conference on computer vision and machine learning	2019	Vol.1228	Yes	IOP Publishing
M. Narendra kumar	N/A	Azolla Cultivation Through IOT by Using Arm Cortex-M0	Internationl Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
V. Veerraju	N/A	Mitigate the Travelling Time in WSN using Cluster-Data Based Tour Planning Algorithm	Internationl Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher

K. J. Silva Lorraine	N/A	Smart Antenna Beam forming using LCMV&MVDR algorithms	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
VenkateswaraRao. Tumati	N/A	Analysis on Mutual Coupling Effects of Linear Patch Antenna Array Using HFSS for Phased Array Radar Applications	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
P H S T Murthy	N/A	Implementation of Car Parking System through FPGA	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
.CH.Ravi Kumar	N/A	Linear Block Codes Reduced Subpacketization with Caching Schemes	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher

M N Venkatesh Babu	N/A	Mutual Coupling Reduction Between Microstrip Patch Antennas Using Slotted-Complementary Split-Ring Resonators	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
Greeshma	N/A	High Speed and Low Power Comparator for High SpeedADCs	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
M Lavanya	N/A	High Speed and Low Power Comparator for High SpeedADCs	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
K Radha	N/A	High Speed and Low Power Comparator for High SpeedADCs	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher

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K.Radha	N/A	Design and Analysis of Low Power SRAM cells	International Conference on Advanced Communication Technologies	2019	978-93-87360-32-7	Yes	PJAZYM Publisher
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Computational Intelligence in Pattern Recognition pp 423–431

Shuffled Differential Evolution Algorithm Based Combined Heat and Power Emission Dispatch

S. Nagaraju ✉, A. Srinivasreddy & K. Vaisakh

Conference paper | First Online: 18 August 2019

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 999)

Abstract

In this paper, a metaheuristic algorithm known as "Shuffled Differential Evolution (SDE)" had been applied to resolve the Combined heat and power emission dispatch (CHPEmD) issue. This SDE algorithm combines features of both the Differential evolution algorithm, shuffled frog-leaping algorithm by incorporating splitting into the partitions and shuffling. To verify the efficacy of this SDE algorithm and also to determine the exemplary solution for the CHPEmD problem, two caliber test systems are considered. The outcomes realized by this SDE algorithm are confronted with the optimization algorithms available in the previous literary works. The contrast of the results shows that SDE technique exhibits impressive performance in delivering the optimal results in terms of convergence and solutions.

Keywords

Differential evolution **Shuffled frog-leaping algorithm**

Shuffled differential evolution and combined heat and power emission dispatch (CHPEmD)

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He has Sixteen years of teaching & research experience and published more than 20 research papers in various reputed International journals and attended number of conferences at national & international level and presented technical papers. He acted as a research supervisor and guided many students in getting their M.Phil and Ph.D Degrees. Apart from teaching, he discharged duties at various capacities and served the students. He has a passion for physics and flair for teaching physics to the students of technology for many years and received laurels from all students.

M.Veeranjaneyulu, working in Sir C.R. Reddy College of Engineering, Eluru. Formally he worked as an Associate professor in physics in Rao & Naidu Engineering College, Ongole, received his M.Sc., B.Ed., Degrees from Nagarjuna University and M.Phil Degree from Andhra University. For the past twenty seven years, he has been rendering his services in enlightening the concepts of Physics to the technical students in the strata of Engineering Physics and to the students at degree level. He has shown his brilliance in Physics at various platforms by presenting papers and by attending various conferences. His conceptual clarity motivates students and inspires them to go for research. He stands as an icon among the teachers of Physics.

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Contents

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Quick certification cellular phone ip contrasted to ranked cellular phone ip

M Madhava Rao[1] and J S V Gopala Krishna[2]

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Journal of Physics: Conference Series, Volume 1228, International conference on computer vision and machine learning 27–28 December 2018, Andhra Pradesh, India

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[1] Asst Professor, Sir C R Reddy College of Engineering, Eluru

[2] Associate Professor, Sir C R Reddy College of Engineering, Eluru

Abstract

Cellular phone IP represents the essential Tr sportability administration protocol to bad g the Transportability in IP-based machines. Although, Cellular phone IP isn't capable for quarantine sensitive Applications. The Quick Certification Cellular phone IP protocol (QICA) is usually recommended to dodge the problems of Cellular phone IP and to contest the necessities of time period Applications. So, QICA doesn't want hierarchic specification as is that the container with best mini Transportability administration protocols, e.g. Rank Cellular phone IP (RCIP). A study show that QICA accomplish kind of like RCIP though the Cellular Nodule (CN) shift inside a site reside of 2 hierarchic slabs solely and surpass RCIP Rather. During the one paper we have a tendency to evolve a close exemplary to examine QICA and distinction it to RCIP. Our subject targets a distinction of the signal price of the 2 protocols. Our study displays that QICA plainly surpass RCIP with honor to the bundle cargo value. What is more, the region amend value though increasing QICA is commensurate to the region amend price exploitation RCIP. Therefore QICA is bigger productive than RCIP with honor to the entire signal price.

Effects of Post-weld Heat Treatment on Microstructure and Mechanical Behavior of Friction Stir Welded Thick Section Al–Zn–Mg–Cu Alloy

| Conference paper | First Online: 28 April 2019

pp 31–40 | Cite this conference paper

Advances in Engineering Design

T. Ramakrishna, S. Srinivasa Rao & G. Swami Naidu

Part of the book series: Lecture Notes in Mechanical Engineering ((LNME))

Abstract

Friction stir welding is considered to be a promising solution to successfully join high strength 7000 series aluminum alloys. However, questions related to a decrease in weld mechanical properties with an increase in plate thickness still remain unanswered. In this study, 16 mm thick AA7075–T651 aluminum alloy plates were successfully joined by friction stir welding. The welds were heat treated using a special solutionizing method called cyclic solution treatment (CST). The effects of CST on mechanical behavior and microstructures of the welds were studied using hardness, tensile, and impact tests and optical microscopy. The post-weld heat treatment

New distributed routing algorithm in wireless network models

Vahiduddin Shariff[1], Yuva Krishna Aluri [2]and Ch Venkata Rami Reddy[3]

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Abstract: The wireless sensor network present all sensor hubs to produce an equal proportion of information packages in a WSN. The centers around a sink need to exchange a more noteworthy number of groups and will all in all fail miserably sooner than various focus focuses in light of the way that in vitality usage of sensor focus focuses in system lifetime can be drawn out by altering the correspondence stack around a sink. This paper introduces another way to deal with tackle this issue by thinking about the psychological capacity of hubs. Most importantly, we misuse the directional gathering receiving wires to propose a directional gathering two-advance recreation routing plan to set up multicast tree for remote multi-jump networks. we think about that terminals make utilization of cutting edge energy collection transmission/gathering methods, for example, maximal proportion consolidating gathering of redundancy codes, or on the other hand information accumulation with rate less codes. Aggregate methods increment communication dependability; diminish energy utilization, and abatement inactivity. Our first calculation is incorporated, expecting that routing calculations should be possible at a focal processor with full access to channel state information for the whole framework. We likewise plan two disseminated routing calculations that require just nearby channel state information. essentially, given us to characterize two recursive calculations of the way a chance to weight utilizing the moderate way weights to each transfer, either from the source (forward) or from the Destination (in reverse). In particular, in the task exhibits a Weight Based Synchronization (WBS) conventional that utilizes the extent of synchronized hub groups as an impetus for synchronization. We outline these outcomes by concentrate the base energy routing issue in static aggregate multi-bounce networks for various sending techniques at transfers. Proposed framework empowers noteworthy performance through the most limited way routing.

Index Terms: routing, networks, increment correspondence unwavering quality, diminish energy utilization, and abatement. • Cognitive systems • Wireless multi-jump systems, Flexible channel assignment.

1. Introduction

Multi bounce transfer systems are a champion among the most unique research focuses in remote correspondences. The utilization of transfers empowers various performance upgrades [1]. Energy proficiency can be enhanced since the separations over which every hub must transmit are regularly decreased altogether. Enhanced strength to blurring and disappointment of different hubs results from each and every one expanded to discrete number of conceivable transmission ways interfacing sink node and destination node, decreasing likelihood of losses of session's availability. The most one is fundamental type of handing-off comprises of routing path information along a solitary way [2]. Two

Experimental Study on Laser Welding of AISI 304 Steel with Design of Experiments Approach

Pawan Kumar Chellu [1], R. Padmanaban [1*], R. Vaira Vignesh [1], Abbhelash S Menon[1], S. M. Shariff [2], and G. Padmanabham [2]

[1] Department of Mechanical Engineering, Amrita School of Engineering, Coimbatore, Amrita Vishwa Vidyapeetham, India.
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Abstract. Austenitic stainless steels find extensive applications in engineering and structural parts requiring inherent corrosion resistance. The main objective of this study is to achieve good quality butt joint in 2.5-mm thick 304 grade Stainless Steel. The joint quality is quantified in terms of weld-bead dimensions. The main issue that manufacturers face is controlling the input process parameters, to get a good quality joint, with required weld bead geometry under controlled thermal distortion. The objective of this work is to select proper input process parameters that would result in desirable weld-bead profiles with minimal heat input. The critical process parameters influencing laser-welding were found using response surface methodology technique. The results proved that the developed model could efficiently predict the responses. The criteria demonstrated a possible reduction in top width of weld bead with enhanced depth of penetration, which automatically envisaged an increase in aspect ratio. A two-factor five-level criteria design was used for predicting the optimized parameters by performing multi-response optimization. Among them, the third criterion has shown a significant decrease in heat input and it was chosen as the best-optimized parameter.

1. Introduction

Laser welding is a high power density and low heat input process that results in a high depth of penetration. Laser welding, especially, keyhole welding, being a fast cooling process, results in sudden shrinkage during solidification. Heat input is one of the major factors that adversely affect the quality of the joint. The main problem in keyhole laser welding is the high amount of heat generation due to a decrease in reflectivity caused by the formation of narrow vapor channel, which traps the laser beam inside the channel. This beam entrapment maximizes the depth of penetration. Sometimes unnecessary heat generation leads to an increase in weld bead dimensions, which results in an increase in top width.

The heat affected zone (HAZ) would be wider when applying high laser power, and the strength of the joint decreases. Also, the fact that the austenitic stainless steel has low thermal conductivity, implies that the heat will be localized. When the laser beam is moved, the localized heat will take more time to conduct through the bulk metal. This increases the top width, simultaneously pushing the HAZ to wider areas. This would allow the grains to grow in the weld zone and in the HAZ, reducing the joint strength. Generally, very high or very low laser power is not recommended.

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Quick certification cellular phone ip contrasted to ranked cellular phone ip

M Madhava Rao[1] and J S V Gopala Krishna[2]

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Journal of Physics: Conference Series, Volume 1228, International conference on computer vision and machine learning 27–28 December 2018, Andhra Pradesh, India

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Abstract

Cellular phone IP represents the essential Transportability administration protocol to backing the Transportability in IP-based machines. Although, Cellular phone IP isn't capable for quarantine sensitive Applications. The Quick Certification Cellular phone IP protocol (QICA) is usually recommended to dodge the problems of Cellular phone IP and to contest the necessities of time period Applications. So, QICA doesn't want hierarchic specification as is that the container with best mini Transportability administration protocols, e.g. Rank Cellular phone IP (RCIP). A study show that QICA accomplish kind of like RCIP though the Cellular Nodule (CN) shift inside a site reside of 2 hierarchic slabs solely and surpass RCIP Rather. During the one paper we have a tendency to evolve a close exemplary to examine QICA and distinction it to RCIP. Our subject targets a distinction of the signal price of the 2 protocols. Our study displays that QICA plainly surpass RCIP with

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Mechanical characteristics of Al-Al_2O_3-SiC metal matrix composites made by stir casting technique

S V Gopala Krishna [1*], B V Subrahmanyam[2] and B Lakshmi [3]

[1&2]Department of mechanical engineering, Sir C R Reddy College of Engineering, Eluru, INDIA
[3]Mechanical engineering department, Adikavi Nannaya University, Rajahmundry, INDIA

Abstract. The present investigation focuses on Al-Al_2O_3-SiC metal matrix composites were prepared by stir casting technique. In this, Pure aluminium (varies proportionately to the reinforcement) act as a base metal and reinforced with Al_2O_3 (standard wt 3%), SiC (varies Wt 3%, 5% and7%) has taken. The samples were prepared at the temperature of 750°C Aluminium (liquid state) and to warm the reinforcement materials at 300°C mixed with it by stirring of 350rpm for equally distributing the reinforcement material while it was consolidated at one place due to density differences. Hybrid composites are potential application for aircraft and space industries because of higher resistance, lower weight to strength ratio, creep resistance. To investigated the mechanical behavior of hybrid composites like hardness, Tensile strength and density.

1. Introduction

Aluminium metal matrix composites (AMMCs) are mostly used in aerospace, automobile industries due to their strength to weight ratio, low coefficient of thermal expansion (CTE) and high hardness. Stir casting is generally accepted for reducing the fabrication cost and easily to prepare very large sized components. Pure aluminium reinforced with micron sized particles of SiC to made as aluminium matrix composite and also 3 % Al_2O_3 was added to improve the wettability and percentage of ceramic particles are incorporated.

Hashim et al was studied that there are some limitations which reveals the Non-uniform distribution and poor wettability during the process happened. The reinforcement particles are uniformly distributed in molten metal those are making float and sinking to the molten metal due to the density differences If, agglomeration and clustering is done by injecting the particles with an inert gas into the molten metal through stirring[3].

Vijaya ramnath et al were studied about the addition of reinforcement materials like al_2O_3, SiC and B_4C etc when the reinforcement of SiC with aluminium they were attained good wear resistance due to the preparation of brake drums is very useful .similarly the reinforcement of Al_2O_3 has been done to increase the volume fraction and to reduced the fracture toughness [18]. U Aybarc et al were studied aluminium metal matrix was the reinforcements of Al_2O_3, SiC and graphene however, the incorporation of reinforcement is major concern and particularly for wettability, formation of porosity have been evaluated. To understood that the type and amount of reinforcement directly reflect on raising of mechanical properties [19]

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Providing an adaptive setup for media-content sources.

D. Srinivasa Rao[1], Rajkamal. Kuchipudi[2], Ch. Sudhakar[3]

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Abstract. Cloud computing provides a versatile framework that media content suppliers may use to procure spilling sources that match the interest. Media content suppliers are charged for the amount of sources distributed (saved) inside the cloud. Most of the current cloud suppliers utilize a costs demonstrate for that saved sources that is reliant on non-straight line time-rebate levies. This sort of costs plan offers extraordinary rebates depending non-directly around the day and age where the sources are saved inside the cloud. Media spilling programs have recently pulled in a great deal of clients on the web. Utilizing the production of these transmission capacity concentrated projects, it's monetarily inefficient to supply spilling conveyance with ensured QoS depending just on focal sources in a media content supplier. Inside this circumstance, a totally open issue is to choose both the right amount of sources saved inside the cloud, and in addition their reservation time with the goal that the financial expense around the media content supplier is limited. The results in our factual assessments and reproductions uncover that the proposed recipe extensively eliminates the financial cost of resource portions inside the cloud as in correlation with other customary plans. We exhort a simple - easy to apply - equation for resource reservation that maximally abuses marked down rates offered inside the taxes, while verifying that adequate sources are held inside the cloud. In accordance with the guess of enthusiasm for gushing limit, our equation is precisely made to forestall settling on wrong resource allotment decisions.

1. Introduction

A media content provider must furnish its datacenter with more than-provisioned amount of sources to get together with the strict QoS needs of gushing movement. Since you'll have the capacity to foresee how huge utilization tops for spilling limit inside a day by day, week after week, month to month, and yearly premise, a media content supplier could make extensive term interests in foundation to center around the normal use top[4, 6, 8]. The substantial interest delivers an encumbrance on incorporated server farms at media content suppliers for instance Videocon-Demand (VoD) suppliers to maintain the required QoS ensure. The issue gets the chance to be more basic utilizing the developing enthusiasm for more prominent piece rates required for that developing amount of more prominent definition video quality favored by shoppers. Inside this paper, we investigate new methodologies that alleviate the cost of gushing circulation on media content suppliers utilizing distributed computing. Subsequently, a great deal of limit in the servers will be sit out of gear as a rule, that is very wasteful and wasteful[1-3]. As opposed to obtaining overprovisioned servers and building individual data focuses, media content suppliers may utilize processing and transmission capacity wellsprings of cloud suppliers[5, 7]. Henceforth, a media content supplier could be seen like a re-dealer of cloud sources, where its savvy the cloud organization for that gushing sources (transfer speed) offered in the cloud straight to customers from the media content supplier. This worldview eliminates the costs of media content suppliers with regards to buy and upkeep of over-provisioned sources in their server farms. Inside the cloud, the amount of allocated sources could be modified adaptively in a fine granularity that is for the most part referred to as auto-scaling. The auto scaling capacity from the cloud improves asset usage by coordinating the accessibility utilizing the interest. In any case, recently, gushing sources (data

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A novel approach to compress dna repetative sequences in bio-informatics

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Abstract

In recent days numbers of gigabyte sequences of nucleotides are stored in a common database Genbank. All the victimization Deoxyribonucleic acid sequences for biological functions are to store the large number of Genomes in a compressed type in economically. Despite the fact that Deoxyribonucleic corrosive arrangements are put away in a packed kind, the information on Deoxyribonucleic corrosive groupings square measure hang on in science databases. For a four-letter alphabet in DNA (Adenine(A), Cytosine(C), Guanine(G) and Thymine(T)), an average description length of 2 bits per base is that the max length required to encode DNA. To reexamine the previous art of compression

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A novel approach to compress dna repetative sequences in bio-informatics

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Abstract: In recent days numbers of gigabyte sequences of nucleotides are stored in a common database Genbank. All the victimization Deoxyribonucleic acid sequences for biological functions are to store the large number of Genomes in a compressed type in economically. Despite the fact that Deoxyribonucleic corrosive arrangements are put away in a packed kind, the information on Deoxyribonucleic corrosive groupings square measure hang on in science databases. For a four-letter alphabet in DNA (Adenine(A), Cytosine(C), Guanine(G) and Thymine(T)), an average description length of 2 bits per base is that the max length required to encode DNA. To reexamine the previous art of compression techniques and its merits and de merits, a novel attempt is initiated. Based on the comparative study of existing algorithms a new method proposed for DNA compression without depending on statistics of sequence set.

Key Words: DNA, GenBank, Phylogenetic Tree, Genomes

1. Introduction

There is large number of databases available for human genomic data. Resulting to the challenging environment on the changes of genomic data (DNA or Protein). The four classifications of DNA were adenine (A), cytosine (C), Guanine (G) and Thymine (T). Without compression two bits required to encode each base by information theory [2]. Even in existing general compression tool like gzip are used [3]. Thus, it became an essential need to compress DNA sequences by developing specific compression algorithms.

1.1 DNA

The genetic information can be passes from one bread to another which is incorporated by DNA is used in the enhancement and functioning of living organisms. Nucleotides and Phosphate, both the teams joined by organic compound were the two long polymers of DNA (Fig.1). In each cell, the organization of DNA is formed into long structures called chromosomes, for ex the human genome contains 23 chromosome pairs. In DNA replication chromosomes are duplicated before cell division.

AZOLLA CULTIVATION THROUGH IOT BY USING ARM CORTEX-M0

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Abstract:- Now-a-days agriculture plays a major role in Indian economy. Farmers are the backbone of agriculture field. As of you know there molka plants are grown up along with the crops. By the way it takes nitrogen and some other nutrients from the crop and these reasons the yield will decreases. All of those reasons we should decide to cultivate the "Azolla" plant.

By cultivating the azolla plants we have to maintain the temperature and pH level of water. Basically azolla gives 30% nitrogen to the crop and it will kills the molka plants. Feeding this azolla to the buffaloes it increases the quality of the milk and increases the production of the milk. By collecting the readings we can use the microcontroller, pH sensor and Wi-Fi module and then we can send the data through the website by using the Wi-Fi module.

Modules— ARM cortex-M, OLED display, DHT11, TL-42(pH sensor), Water motors, ESP-01, DC fan

1. Introduction

In agriculture areas farmers are used pesticides and different types of chemicals to increase the production and quality of the rice, by use of these chemicals and pesticides farmers have more investment in that particular chemicals, by end of this we have to implimeated or cultivate azolla plants it will grow with in two days under certain temperature conditions. The plants numbers multiplied day by day because these plants produced their eggs while using this azolla plants it will gives 30% nitrogen to the crop. And we feed buffaloes with these azolla the quality of the milk increases. Another use of this azolla is to use in aqua culture it will gives more proteins to the fishes. Then we calculate the pH and temperature readings and then it sends to the iot platform by using ESP-01 and then it will have cloud storage also. By thus cloud storage we have to know what is the temperature and pH value at that particular time.

2. LITERATURE SURVEY

Azolla is a genus of seven species of aquatic ferns in the family Salviniaceae. They are extremely reduced in the form and specialized, looking nothing like other type of ferns but more resembling duckweed or some mosses. Azolla filiculodies is one of just to fern species for which a reference genom.

Azolla is a highly productive plant. It doubles its biomass in 3-10 days, depending on the climatic conditions. Azolla filiculoides is the family of Azollaceae in Tasmania. It is a very common native aquatic plant in Tasmania. It is particularly common on farm dams and other still water bodies. Azolla float on the surface of water by means of numerous, small, closely overlapping scale like leaves, with their roots hanging in the water.

Image of Azolla

Kasim M.Al-Aubidy et al. [1] has demonstrated that a rule-based fuzzy controller has been designed to control the microclimate of each greenhouse. The proposed system enables the farmer to monitor both the internal environment of the greenhouse. Also, the farmer can send commands to turn ON or OFF certain devices in a selected greenhouse through wireless communications. Simulated and real results have been achieved to demonstrate the system performance and real-time remote monitoring and control activities.

Yunseop (James) Kim, Member, IEEE et al. [2] has proposed an irrigation machine was converted to be electronically controlled by a programming logic controller that updates georeferenced location of sprinklers from a differential Global Positioning System (GPS) and wirelessly communicates with a computer at the base station. Communication signals from the sensor network and irrigation controller to the base station were successfully interfaced using low-cost Bluetooth wireless radio communication.

Jzau-Sheng Lin et al. [3] has proposed a field signals monitoring system with wireless sensor network (WSN) which integrates a System on a Chip (SoC) platform and Zigbee wireless network technologies in precision agriculture. The designed system was constituted by three parts which include field-environment signals sensing units, Zigbee transceiver module and web-site unit. Firstly we used acquisition sensors for field signals, an MCU as the front-end processing device, and several amplifier circuits to process and convert signals of field parameter into digital data.

Adnan Shaout et al. [4] has proposed a low power, low cost, robust data collection system to generate and gather data autonomously in isolated or remote areas. The sensor module collects soil moisture and temperature data

Mitigate the Travelling Time in WSN using Cluster-Data Based Tour Planning Algorithm

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ABSTRACT- ***In wireless sensor networks (WSNs), the benefits of exploiting the sink mobility to prolong network lifetime have been well recognized. In physical environments, all kinds of obstacles could exit in the sensing field. Therefore, a research challenge is how to efficiently dispatch the mobile sink to find an obstacle-avoiding shortest route. This paper presents an energy-efficient routing mechanism based on the cluster-based method for the mobile sink in WSNs with obstacles. According to the cluster-based method, the nodes selected as cluster heads collect data from their cluster members and transfer the data collected to the mobile sink. In this paper, the mobile sink starts the data-gathering route periodically from the starting site, then directly collects data from these cluster heads in a single-hop range, and finally returns to the starting site. However, due to the complexity of the scheduling problem in WSNs with obstacles, the conventional algorithms are difficult to resolve. To remedy this issue, we propose an efficient scheduling mechanism based on spanning graphs in this paper. Based on the spanning graph, we present a heuristic tour-planning algorithm for the mobile sink to find the obstacle-avoiding shortest route. Simulation results verify the effectiveness of our method.***

Key words: Wireless sensor networks, obstacles, energy-efficient routing, cluster-based, mobile sink, spanning graph.

INTRODUCTION

Wireless Sensor Networks (WSNs) have been applied in many respects including health monitoring, environmental monitoring, military surveillance, and many others as Internet of Thing (IOT) [1]–[3]. Energy efficiency has become the most key issue for WSNs. However, power supplies for sensor nodes are limited and hard to replace. In addition, compared with other nodes, nodes near the base station (also called the sink) consume more energy, since the nodes relay the data collected by sensor nodes far away from the sink. Hence, once these sensors near the sink fail, the data collected by other sensors cannot be transferred to the sink. Then, the entire network becomes disconnected, although most of the nodes can still have a lot of energy. Therefore, to extend the network lifetime, minimizing the energy consumption of sensor nodes is the key challenges for WSNs.

Different approaches are proposed to prolong the lifetime of WSNs. Recent work shows that we can use mobile nodes to reduce the energy expenditure of WSNs to a large extent.

Consequently, the life time of WSNs is prolonged. Compared with static nodes, mobile nodes have more energy and more powerful capabilities. Mobile nodes, which are usually mounted on a mobile vehicle equipped with enough energy, can collect data from all static nodes by moving across the sensing field. The data from static nodes can be collected by mobile nodes in one-hop or multi-hop way. The papers [4]–[7] have proposed several different approaches. In this paper, mobile nodes are used as the mobile sink which moves across the sensing field to collect data. On the one hand, the mobile sink reduces the communication overhead for sensor nodes close to the base station or the sink, which leads to the uniform energy consumption. One the other hand, with the movement of the sink, we can better handle the disconnected and sparse network. Therefore, the network life time can be significantly extended by the optimum control of the route of the mobile sink. In physical environments, the sensing field could contain various obstacles. Hence, to prolong the network lifetime, a research challenge is how to find an obstacle-avoiding shortest route for the mobile sink.

In this paper, the mobile sink will move through the network with obstacles to find an obstacle-avoiding shortest route. At the same time, the mobile sink must consider the energy consumption balance among nodes while moving across the sensing field. To dispatch the mobile sink efficiently, we utilize the cluster-based method that is presented in [8] and [9]. According to the cluster-based method, all sensor nodes in the sensing field are divided into two categories: cluster heads and cluster members. Cluster heads collect data from corresponding cluster members which collect environment information, and then pass data to the mobile sink. We assume that WSNs can tolerate some extent of delay so that the mobile sink collects all sensing data from cluster heads. The mobile sink begins its periodical movement from starting site and finally returns. During its movement, the mobile sink collects the sensing data from cluster heads. Once its moving path is planned, the mobile sink can move near the cluster heads and consume less energy. Hence, the network lifetime can be prolonged significantly. In this paper, the network lifetime is defined as the time interval from sensor nodes start working until the death of all static sensors. However, in physical environments, the

Smart Antenna Beam forming using LCMV&MVDR algorithms

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Abstract

In the real world environment, the signal received by a communication system consists of desired signal, interference and noise. Therefore, to cancel out the interference, noise and to steer the antenna beam towards the desired target, adaptive beamforming is used prominently. Antennas with such type of beam steering capability are termed as smart antennas. Minimum variance distortion less response (MVDR) and Linear constraint minimum variance (LCMV) are widely used to steer or produce a strong beam to the desired signal through its computed weight vectors. In this paper, the performance analysis of LCMV and MVDR beam forming techniques has been studied by considering a satellite and Pseudolite scenario. For that particular scenario, LCMV technique seems to show better performance than MVDR method.

Keywords: Beamforming, Pseudolite, Linear Constraint Minimum Variance (LCMV),Minimum Variance Distortionless Response (MVDR)

I. Introduction

Beamforming or spatial filtering is a signal processing technique which is used in sensor arrays for directional signal transmission or reception. It can be used at both the transmitting and receiving signals in order to achieve spatial selectivity.. Beamforming can be used for radio or sound waves. It has various applications in radar, sonar, seismology, ***wireless, communications***, radio astronomy, acoustics and biomedicine. Adaptive beam forming is used to detect and estimate the signal..To change the direction of the array while transmitting, a beamformer controls the phase and relative amplitude of the signal at each transmitter to create a pattern of constructive and destructive interference in the wavefront. When receiving, information from different sensors is combined in a way where the expected pattern of radiation is preferably observed. Fig 1shows the beam forming process[1].

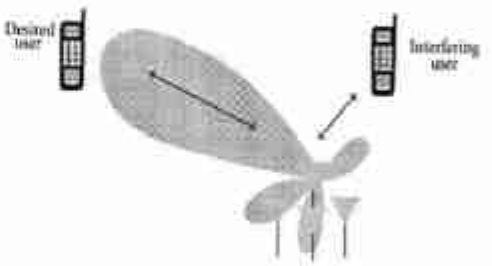

Fig 1: Beam forming

II. Direction of Arrival (DOA) Estimation

In this work, DOA for the desired signal, interference and Pseudolite (PL) has been done by using MUSIC algorithm. PL is used in satellite augmentation systems to enhance the systems availability and continuity. PL signal should not be eliminated completely but depending on the location of user with respect to PL, the null depth has to be controlled accordingly.

MUSIC algorithm:- Multiple Signal Classification (MUSIC) algorithm was proposed by Schmidt and his colleagues in 1979 . It is well known that music algorithms out performs any method. Modified music works better than the ordinary music at different SNR. It becomes a

Analysis on Mutual Coupling Effects of Linear Patch Antenna Array Using HFSS for Phased Array Radar Applications

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Abstract-- This paper presents the new method for mutual coupling reduction in microstrip patch antenna. It is relatively low gain and narrow bandwidth. By using the patch antenna array, antenna performance can be improved. In this paper design and stimulation of a 9 element rectangular microstrip patch array is described and the performance of antenna array is optimized by varying patch inter element spacing. Antenna array is designed to operate at the frequency of X-band. The 3x3 antenna array will be implemented on FR4 substrate with 1.588mm thickness and dielectric constant of 4.4.The stimulation and performance analyze of antenna is done using Ansoft High frequency structure simulator software. Finally, comparison of antenna array characteristics before and after optimization will be presented.

Key words: mutual coupling, antenna array

I. Introduction

A phased array consists of definitely arranged, finite sized antenna elements, which are fed by a suitable feed network. In this array, the fields gets radiated from one antenna may be received by the other elements. More over this may be reflected, reradiated, or scattered. The properties of these signals depend on the signal power, reflection coefficients, and additional electrical phase received due to the propagation delay from one element to the other element. This kind of correlation between the antenna elements will be accompanied to coupling effect and hence can adjust the array characteristics. Several researchers have studied the effect of mutual coupling on different types of adaptive arrays. These include Yagi array [1],microstrip patch antenna arrays [3], linear antenna arrays of dipole, spiral antennas [4], on formal dipole arrays [5], helical arrays [6] and arrays of arbitrary geometry [7]. The effect of mutual coupling [2] on the array parameters such as antenna impedance and steering vector, which affects the radiation pattern, resolution and interference.

II. Parameters effected due to mutual coupling

A. Antenna Impedence

The antenna radiation pattern mainly depends up on the impedance at the antenna terminals. However, the antenna impedance of phased array is consequently different in comparison to that of an isolated element. This variation in impedance is due to the mutual coupling between the array elements.

The mutual coupling basically depends on the magnitude of surface wave, and hence on the substrate thickness, for different configurations. Hence for antenna array design selection of

Implementation of Car Parking System through FPGA

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Abstract— In Present days usage of motor vehicles are increased day by day, it causes the traffic congestion and parking place problems. In this paper we proposed a secured car parking management system using Verilog HDL. Here parking system is implemented using Finite State Machine modelling. The system has two main modules i.e. identification module and slot checking module. Identification module identifies the visitor. Slot checking module checks the slot status. These modules are modelled in Verilog HDL and implemented on FPGA. It also provides security to our vehicles. A prototype of parking system is designed with various interfaces like sensor interfacing, stepper motor and LCD.

Keywords—Car park management system, Verilog HDL, Security , FPGA

I. INTRODUCTION

The car parking has become an immense issue especially in big cities. Two main reasons can be cited for this. One reason is the growth in population and the other is the security. Many efforts have been made to introduce a method to reduce parking problems such as congestion, accidents and hazards .Car theft has become an evil art now a days. Now the question arises, is it possible to introduce such a system that would solve all these issues and will be intelligent too. We have provided an interface and software/ hardware module which is validated using a test case scenario. The extensive experimentation proves the feasibility of the approach. ICPM solves all the issues related to car parking such as finding free parking slots and certainly the security issues. Systematic parking with security is the main motto. Security includes the usage of password at the time of park; Indication of number of available adjacent vacancies as well as their positions where only the adjacent vacancies are needed in particular The central idea of the project came from the troubles we face in parking our cars in our daily routine. The inspiration was always there but it required a rock-solid approach. The nuisance of parking cars is escalating day by day. Indeed a good design was required. To avoid these problems, design of secured car parking management system is proposed, which will be implemented on FPGA to check vacancies and give security to car. Recently, a reconfigurable FPGA design is efficient method to implement a digital logic, because FPGA provides a compromise between general-purpose processors and ASIC. The FPGA based design is also more flexible, programmable and can be re-programmed. FPGA based design can be easily modified by modifying design's software part. Our proposed system is designed in FPGA design style and gate level modeling. This occupancy information is further processed by a central control unit and distributed to display panels located at strategic locations at the parking area. The drivers can easily find a vacant parking lot based on the information displayed on the panels.

II. ALGORITHM

We have divided the proposed CPMS into following different modules:

A. Car Entering Module

In Car Entering Module, as the car enters the lot, it is detected by the IR Sensors. The IR Sensors provide the pulse to the FPGA

LINEAR BLOCK CODES REDUCED SUBPACKETIZATION WITH CACHING SCHEMES

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ABSTRACT-Coded caching is a technique that generalizes conventional caching and promises significant reductions in traffic over caching networks. However, the basic coded caching scheme requires that each file hosted in the server be partitioned into a large number (i.e the subpacketization level) of non-overlapping subfiles. From a practical perspective , this is problematic as it means that prior schemes are only applicable when the size of the files is extremely large. In this paper, we propose coded caching schemes based on combinational structures called resolvable designs. These structures can be obtained in a natural manner from linear block codes whose generator matrices possess certain rank properties. We obtain several schemes with subpacketization levels substantially lower than the basic scheme at the cost of an increased rate. Depending on the system parameters our approach allows us to operate at various points on the subpacketization level vs rate tradeoff.

1. INTRODUCTION

Caching is a popular technique for facilitating large scale content delivery over the internet. Traditionally, caching operates by sorting popular content closer to the end user's file request partially (or sometimes entirely) with the remainder of the content coming from the main server. Prior work in this area demonstrates that allowing coding in the cache and coded transmission from the server (referred to as *coded caching*) to the end users can allow for significant reductions in the number of bits transmitted from the server to the end users. This is an exciting development given the central role of caching in supporting a significant fraction of Internet traffic. In particular, reference [1] considers a scenario where a single server contains N files. The server connects to K users over a shared link and each user has a cache that allows it to store M / N fraction of all the files in the server. Coded caching consists of two distinct phases: a *placement phase* and a *delivery phase*. In the placement phase, the caches of the users are populated. This phase does not depend on the user demands which are assumed to be arbitrary. In the delivery phase, the server sends a set of *coded* signals that are broadcast to each user such that each user's demand is satisfied.

The original work of [1] considered the case of centralized coded caching, where the server decides the content that needs to be placed in the caches of the different users. Subsequent work considered the decentralized case where the users populate their caches by randomly choosing parts of each file while respecting the cache size constraint. Recently, there have been several papers that have examined various facets of coded caching. These include tightening known bounds on the coded caching rate [2], [3], considering issues with respect to decentralized caching [4], explicitly considering popularities of files [5], [6], network topology issues [7],[8] and synchronization issues [9], [10].

In this work, we examine another important aspect of the coded caching problem that is closely tied to its adoption in practice. It is important to note that the huge gains of coded caching require each file to be partitioned into no

Mutual Coupling Reduction Between Microstrip Patch Antennas Using Slotted-Complementary Split-Ring Resonators

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***Abstract*—A novel structure based on complementary split-ring resonators (SRRs) is introduced to reduce the mutual coupling between two coplanar microstrip antennas that radiate in the same frequency band. The new unit cell consists of two complementary SRR inclusions connected by an additional slot. This modification improves the rejection response in terms of bandwidth and suppression. The filtering characteristics of the band-gap structure are investigated using dispersion analysis. Using the new structure, it was possible to achieve a 10-dB reduction in the mutual coupling between two patch antennas with a separation of only 1/4 free-space wavelength between them. Since the proposed structures are broadband, they can be used to minimize coupling and co-channel interference in multiband antennas.**

***Index Terms*—Complementary split-ring resonators (CSRRs), defected slots, low-profile antennas, microstrip patch antennas, mutual coupling.**

I. INTRODUCTION

Surface waves and near fields can lead to coupling between coplanar and patch antennas [1]–[3]. The near-field coupling arises when an antenna is placed in the near-field zone of another antenna. The near-field coupling is strong in situ-ations where the antennas are printed on dielectric substrates with very low permittivity [3]. In such scenarios, the coupling can result in severe degradation to the antenna's radiation char-acteristics. While surface waves are weakly excited in very thin grounded dielectric substrates, space-waves dominate and show strong coupling when antennas are in close proximity.

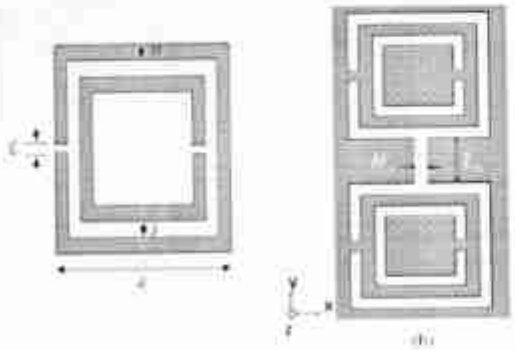

Fig. 1. (a) CSRR unit cell (b) Proposed SCRRs unit cells. Note that the shaded areas represent metallization and the figure is not drawn to scale. E-field is normal to the axis of CSRR slotted inclusions.

Several methods to reduce the mutual coupling between patch antennas were reported in the literature. In [4] and [5], electromagnetic band-gap (EBG) structures using the mushroom-like topology were used. However, the structures involved plated through-holes (vias), which are not attractive from the electric loss and manufacturing perspective. In [5], planar EBG structures were used, eliminating the need for vias, however incurring the complexity and cost of using two dielectric layers. In [6], spiral resonators were embedded within the dielectric substrate, requiring an elaborate fabrication process and increased losses in the antenna system.

Complementary split-ring resonator (CSRR) structures were used for harmonic rejection and filtering [7]. The CSRR [see Fig. 1(a)] electromagnetic behavior is best understood by applying the duality principle to the magnetically resonant SRR structures [8]. The SRR-based magnetic materials react to the vertically polarized (with respect to the SRR's plane) magnetic fields. Their resonance behavior is due to the induced electromotive force that generates a current that flows within the metallic rings and gaps, producing a balanced inductive-capacitive ef- fect. From duality, the CSRR exhibits resonant behavior in the presence of vertically polarized electric fields [9]. Therefore, such structures have proven to be particularly useful in an electromagnetic environment where the electric field is dominantly vertically polarized.

In this letter, mutual coupling reduction between two patch antennas is achieved by introducing a novel CSRR cell. Fig. 1 shows the unit cells of the CSRR [Fig. 1(a)] and the new structure [Fig. 1(b)], which will be referred to as the slotted-CSRR (SCSRR). Full-wave simulation is used to investigate the effects of the SCSRR on the antenna's parameters. The new configuration is implemented by etching away the copper sections from the ground plane. The fabrication does not require any modifications to the existing dielectric substrate. Consequently, the antenna remains low-profile and lightweight, and the far-field properties are practically left unchanged.

High Speed and Low Power Comparator for High SpeedADCs

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Abstract– A high-speed CMOS comparator with preamplifier and compare-latch circuit designed in UMC 0.18μm CMOS process with 1.8V power supply has been presented in this paper. It is a suitable choice for high speed flash-type ADCs. The comparator gives a resolution of 0.1mV at 500MHz with a power dissipation of 175 μW.

IndexTerms–ADC,Preamplifier,PositiveFeedback, OffsetVoltage and Self-biased Differential Amplifier

I. INTRODUCTION

Comparators are most probably second most widely used electronic components after operational amplifiers in this world. Comparators are known as 1-bit analog-to- digital converter and for that reason they are mostly used in large abundance in ADC converter. In the analog-to- digital conversion process, it is necessary to first sample the input. This sampled signal is then applied to a combination of comparators to determine the digital equivalent of the analog signal. The conversion speed of comparator is limited b y the decision making response time of the comparator. The basic functionality of a CMOS comparator is used to find out whether a signal is greater or smaller than zero orto compare an input signal with a reference signal and outputs a binary signal based on comparison[1].

The main contribution of the paper is to design the comparator with high resolution, high speed and low power. In this paper we designed a comparator and simulated using UMC 0.18μm CMOS technology. The paper is further organized as follows. The Circuit Topology is briefly discussed in section IIandcomparatordesignwithsimulationresultsarediscussedin section III. The performance summary and simulation results of the design are introduced in section IV. Finally, the paper is concluded in sectionV.

II. CIRCUITTOPOLOGY

There are three stages in this comparator as shown in Fig 1. The preamplifier, a positive feedback or decision making stage and an output buffer stage. The preamp stage amplifies the input signal to improve the comparator sensitivity (i.e. increases the minimum input signal with which the comparator can make a decision) and isolates the input of thecomparator from switching noise coming from the positive feedback stage i.e. kick back noise effect. The use of a preamplifier before the decision circuit also has the advantage of reducing the input offset voltage of the latch by the gain of the preamplifier. The input offset voltage of the comparator will now become that of the preamplifier, which can be auto zeroed, resulting in small values of input-offset voltage. The positive feedback stage is used to determine which of the input signal is larger. The output buffer amplifies this information and outputs a logic signal (i.e., 0 or VDD)[2].

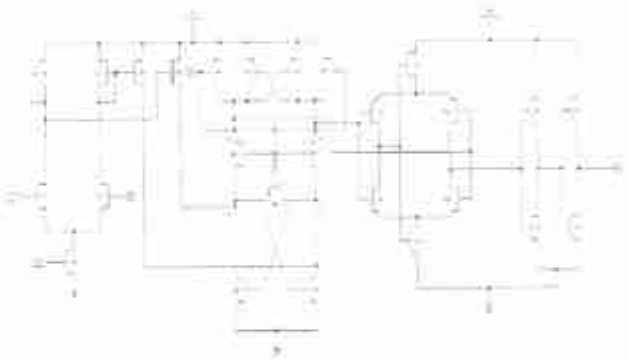

Fig. 1 Schematic of the Comparator

The design of the preamplifier must be done in such a manner that the desired latch or decision circuit input voltage is achieved in minimum time. This means that the bandwidth must be as large as possible. We know that the gain bandwidth of an amplifier is normally constant. The low gain preamplifier must compromise between a high bandwidth and sufficientgain.

The circuit works as follows: During nclk, the switches M11 and M12 disconnect VO++ and VO-- from the sensing nodes (VO+ and VO-) and pulled up to VDD by M14 and M15. When M13 is closed, it equalizes the sensing node voltages. A mismatch between the two differential input voltages causes an unequal amount of current to be injected into the sensing nodes. When switch M13 is released, the first regeneration phase starts, and the small current imbalance cause the cross coupled transistors M9 and M10 to pull down

High Speed and Low Power Comparator for High SpeedADCs

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Abstract—A high-speed CMOS comparator with preamplifier and compare-latch circuit designed in UMC 0.18μm CMOS process with 1.8V power supply has been presented in this paper. It is a suitable choice for high speed flash-type ADCs. The comparator gives a resolution of 0.1mV at 500MHz with a power dissipation of 175 μW.

IndexTerms—ADC,Preamplifier,PositiveFeedback, OffsetVoltage and Self-biased DifferentialAmplifier

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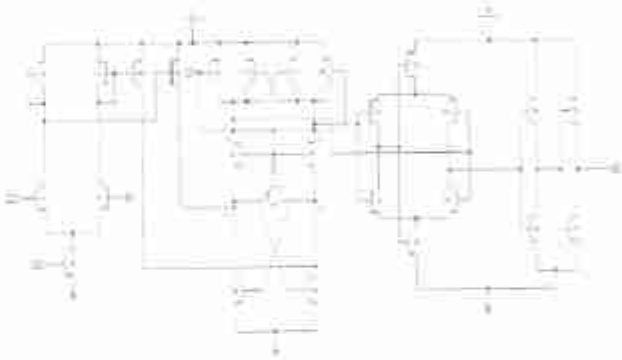

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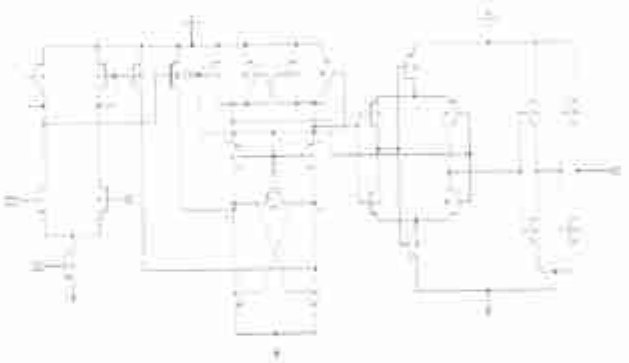

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HYBRID SMART HOME CONTROL SYSTEM

[1]N Swathi, [2]M Pavithra, [3]K B Bhuvaneswari, [4]O Avinash, [5]M Ravindra
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***Abstract*— In modern society, more electronic appliances have been presented at home and office. There comes out a problem that how to manage and control these increasing various appliances efficiently and conveniently so as to achieve more comfortable, secure and healthy space at home. Main aim of this project is to provide home automation in offline and online. In offline we can control electronic devices from 50 Meters distance and with internet we can control electronic devices globally. RF remote switch is chosen to provide transmission using wireless communication technologies which is radio frequency to replace cable between the home application and their switch socket. The proposed project is a combination of wireless switch and a mobile app which (IoT) for controlling home appliances such as switching light, fan, Television, Air conditioner, electrical motors etc. In online using firebase as an online database created mobile app is created using MIT app Inventor. This firebase database takes commands using internet to control the home appliances.**

***Index Terms*—RF Remote Switch, IoT, firebase database, Wireless communication**

1. INTRODUCTION

Control and monitoring of home electronics can be done anywhere without touching them, it is useful to modern life, hospitals , industries, agriculture and avoid time wastage for observing and controlling. The home automation systems are developed with different technologies such as Zigbee, GSM , Bluetooth, Ethernet, RF, and IoT. The most popular home automation system is internet of Things(IoT) but IoT based home automation system must require internet and another best method is RF based home automation system. RF based home automation system doesn't require internet but disadvantage is limited range around 50meters to 100 meters .

So introducing the combination of RF and IoT home automation system over come each other disadvantage in this scope. This combination of home automation provides offline and online control.

2. RELATED WORK

Home automation has been around since the World War I (1914), in fact, the television remote (a simple home automation system) was patented in 1893. Since then different home automation systems have been evolved with a sharp rise after the Second World War. Its growth has been through various informal research and designs by technology enthusiasts who want a better way of getting things done at home without much effort on their part.

Home Automation Systems

The new stream of home automation systems has developed into a vast one and the current market is flooded with a flurry of home automation systems and device manufacturers.

Home Automation Implementation Platforms

Home automation can be implemented over a number of platforms namely, Power line, RS232 serial communication, Ethernet, Bluetooth, Infrared and GSM. Each platform having its own peculiarity and area of application.

3. HARDWARE IMPLEMENTATION

The hybrid home control system consists of RF remote switch and an Android Mobile app designed using MIT app inventor with firebase online database.

3.1 RF Transmitter and Receiver (Module)

The RF module, as the name suggests, operates at Radio Frequency. The corresponding frequency range varies between 30 kHz & 300 GHz. In this RF system, the digital data is represented as variations in the amplitude of carrier wave. This kind of modulation is known as Amplitude Shift Keying (ASK). RF can travel through larger distances making it suitable for long range applications. RF signals can travel even when there is an obstruction between transmitter & receiver.

This RF module comprises of RF Transmitter and RF Receiver. The transmitter/receiver (Tx/Rx) pair operates at a frequency of 434MHz. The RF transmitter receives serial data and transmits it wirelessly through RF through its antenna connected at pin4. The transmission occurs at the rate of 1Kbps - 10Kbps.The transmitted data is received by an RF receiver operating at the same frequency as that of the transmitter.

3.2 ESP32

ESP32 is highly-integrated with in-built antenna switches, power amplifier, low-noise receive amplifier, filters, and power management modules. ESP32 adds priceless functionality and versatility to different applications with minimal Printed Circuit Board (PCB) requirements. ESP32 can interface with other systems to provide Wi-Fi and Bluetooth functionality through its interfaces.

3.3 Encoder and Decoder

Encoder HT12E converts the parallel inputs into serial output. It encodes the 12 bit parallel data into serial for transmission through an RF transmitter. These 12 bits are divided into 8 address bits and 4 data bits. HT12E has a transmission enable pin which is active low. When a trigger signal is received on TE pin, the programmed addresses/data are transmitted together with the header bits via an RF or an infrared transmission medium. HT12E begins a 4-word transmission cycle upon receipt of a transmission enable. This cycle is repeated as long as TE is kept low. As soon as TE returns to high, the encoder output completes its final cycle and then stops.

Decoder HT12D converts the serial input into parallel outputs. It decodes the serial addresses and data received by, say, an RF receiver, into parallel data and sends them to output data pins. The serial input data is compared with the local addresses three times continuously. The input data code is decoded when no error or unmatched codes are found. A valid transmission is indicated by a high signal at VT pin. HT12D is capable of decoding 12 bits, of which 8 are address bits and 4 are data bits. The data on 4 bit latch type output pins remain unchanged until new is received.

3.4Relay:

Relay is an electromagnetic device which is used to isolate two circuits electrically and connect them magnetically. They are very useful devices and allow one circuit to switch another one while they are completely separate. They are often used to interface an electronic circuit (working at a low voltage) to an electrical circuit

AN EFFICIENT AND DYNAMIC QUERY COMPRESSIVE WIRELESS SENSING NETWORKS.

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Abstract— Compressive Sensing (CS) establish information assembling is a auspicious technique to decrease vitality utilization in remote sensor systems or Remote sensor systems. Customary CS establish Information assembling approaches require a substantial more amount of sensor hubs to take an interest in every CS estimation work, bringing about giant vitality utilization, and don't ensure bulky balance. In this paperwork, we put forward a sparser examination relies upon changed dissemination rippling, which abuse sensing element readings spatial relationship in Remote Sensor Systems. Specifically, information assembling plan with joint steering and CS is exhibited. A changed insect state calculation is embraced, where next bounce hub choice takes a hub's remaining vitality and way length into thought all the while. In addition, so as to accelerate the inclusion rate and keep away from the neighborhood ideal of the calculation, an improved pheromone sway factor is advanced.

Keywords— Compressive Sensing (CS), Wireless Sensor Network (WSN), Sparser, spatial Relationship, Pheromone

I. INTRODUCTION

we present the CS hypothesis on detecting hubs to pack detecting information and store compacted information on capacity hubs with the goal that the correspondence and space overhead can be altogether decreased. All the more vitally, we enable querists to dispatch Top-k questions to the capacity hubs, which can related to versatile compacted information decrease (ACDR) to get required information from the pressure area as per the k positions and go back inquiry outcome to the querists. ACDR empowers stockpiling hubs to progressively alter the extent of compacted information as per the k positions propelled by querists with the goal that the correspondence overhead is lower than that of different techniques in writing..

II. RELATED WORK

As of late, various CS establish information assembling methods were given to expand the network's allotted span by diminishing measure of transference information also adjusting heap of the entire remote sensor systems [12,13,20,21]. Luo et al. first investigated the large-scale remote sensor systems, specifically, compressive information gathering (CDG) [12]. In [12], demonstrate that the system limit is related to meager dimension of sensor hub study values. In any case, this technique shows an expansion in quantity of estimated tests prompts development of transmission costs contrasted with the non-CS method. CS storage [13] abuses the spatial relationship of sensor node study values alongside CS lessens quantity of transference information focuses, going for lengthen the WSNs' lifespan. Present compressive remote detecting, distributed, equated-source channel correspondence engineering was planned for vitality effective esteem of sensor hub study values [20]. Notwithstanding, spatial connection [20] are not treated. The creators of [21] demonstrate half and half CS accomplish great system output, while plain CS not provide a noteworthy development in output on account of thick estimation grid.

Until now, collaboration among steering and pressure information assembling has seriously delay the advancement of CS in remote sensor systems [12, 22]. These information strategies mutually utilize routing and CS to alleviate the information output. The creators of [22] label the information gathering issue in WSNs, accompanied by steering utilized in blend with CS to transmit irregular information prediction. However, system shows scanty estimation grid not at all veers off from RIP method, but doesn't limit carry vitality utilization for every CS estimation. By and by, in [12], guarantee the estimation grid has great RIP; what's more, CDG can facilitate decrease communication price for the two, chain-type and tree-type steering. On the other hand, this technique need huge amount of sensor hubs engaged with every projection gathering, realizing more transmission price. To fundamentally lessen information jam and spare capacity, circulated multiple chain CS establish on a steering calculation in WSNs is introduced. Be that as it may, the estimation grid is still a dense estimation framework [16]. In a circulated scanty irregular estimation is planned, where the meager or else compressible flag might be recuperated. Wang et al. think about that a few sensor nodes rather than every one of them are required in every estimation. Besides, the creators of [23]show that scanty arbitrary projection altogether improves organize execution. The communication price can be decreased to O(log N) bundles for every sensor, however here system uses arbitrary steering in the networks, which lessen the vitality productivity of WSNs. In [14] a sparest arbitrary booking for compressive information assembling is given to fulfill RIP method; a meager premise is constructed based on the estimation framework and sensor hub study values. The plan asserts that it can attain

DESIGN OF TERNARY LOGIC ARITHMETIC CIRCUITS USING CNTFET

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Department of ECE,Sir C.R.Reddy college of engg ,Eluru,India.

Abstract:
Multiple-valued logic (MVL) is an alternative solution to interconnect complexity and growing power dissipation by wires. As one of the promising new devices, CNTFET avoids most of the fundamental limitations for traditional silicon devices. This paper proposes a novel design of low-power and high-performance ternary Inverter, NAND, Half adder using CNTFETS. HSPICE simulations are conducted with the standard 32 nm CNTFET technology in order to evaluate the performance metrics of the realized circuits. The performance of ternary based logic gates is evaluated in terms of a parameter such as power dissipation and delay. Keywords: Carbon Nano Tube Field Effect Transistor, Multiple valued logic (MVL), Half Adder, Delay.

I.INTRODUCTION

According to Moore's law, the dimensions of individual devices in an integrated circuit have been decreased by a factor of approximately two every two years. This scaling down of devices has been the driving force in technological advances since late 20th century.However, as noted by ITRS 2009 edition, further scaling down has faced serious limits related to fabrication technology and device performances as the critical dimension shrunk down to sub-22 nm range. The limits involve electron tunnelling through short channels and thin insulator films, the associated leakage currents, passive power dissipation, short channel effects, and variations in device structure and doping. These limits can be overcome to some extent and facilitate further scaling down of device dimensions by modifying the channel material in the traditional bulk MOSFET structure with a single carbon nanotube or an array of carbon nanotubes. Carbon nanotubes (CNTs) are at the forefront of these new materials because of the unique mechanical and electronic properties. Carbon nanotube field effect transistor (CNFET) is the most promising technology to extend or complement traditional silicon technology due to three reasons: First, the operation principle and the device structure are similar to CMOS devices; we can reuse the established CMOS design infrastructure.Second, we can reuse CMOS fabrication process. And the most important reason is that CNFET has the best experimentally demonstrated device current carrying ability to date.

CNTFET:

As one of the promising new devices, CNFET avoid most of the fundamental limitations for traditional silicon devices. All the carbon atoms in CNT are bonded to each other with sp2 hybridization and there is no dangling bond which enables the integration with high-k dielectric materials. In the next section, we will introduce the basic properties of CNFET, and will describe the problem to be modelled. A carbon nanotube field-effect transistor (CNTFET) refers to a field-effect transistor that utilizes a single

AoD-Adaptive Subspace Codebook for Channel Feedback in FDD Massive MIMO Systems

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Abstract :Channel feedback is essential in frequency division duplexing (FDD) massive multiple-input multiple-output (MIMO) systems. Unfortunately, previous work on multiuser MIMO has shown that the codebook size for channel feedback should scale exponentially with the number of base station (BS) antennas, which is greatly increased in massive MIMO systems. To reduce the codebook size and feedback overhead, we propose an angle-of-departure (AoD)-adaptive subspace codebook for channel feedback in FDD massive MIMO systems. Our key insight is to leverage the observation that path AoDs vary more slowly than the path gains. Within the angle coherence time, by utilizing the constant AoD information, the proposed AoD-adaptive subspace codebook is able to quantize the channel vector in a more accurate way. We also provide performance analysis of the proposed codebook in the large-dimensional regime, where we prove that to limit the capacity degradation within an acceptable level, the required numberof feedback bits only scales linearly with the number of resolvable (path) AoDs, which is much smaller than the number of BS antennas. Moreover, we compare quantized channel feedback using the proposed AoD-adaptive subspace codebook with analog channel feedback. Extensive simulations that verify the analytical results are provided.

I.INTRODUCTION

Massive multiple-input multiple-output (MIMO) using hundreds of base station (BS) antennas is a key technology for 5G wireless communication systems.By simultaneously serving multiple users with simple linear precoders and combiners, massive MIMO can improve sum spectral efficiency by orders of magnitude [2]. Channel feedback is essential in frequency divisionduplex (FDD) massive MIMO to learn the channel state information at the transmitter (CSIT).Channel feedback schemes based on the pre-defined codebook known at both BS and users havebeen widely used in wireless systems such as LTE/LTE-A, IEEE 802.11n/ac and WiMAX [3].Unfortunately, previous work on multiuser MIMO [4], [5] has shown that the codebook sizefor channel feedback should scale exponentially with the number of BS antennas to guaranteethe capacity loss within an acceptable level. As the number of BS antennas in massive MIMOsystems is much higher than that of current systems, the codebook size and feedback overheadwill be overwhelming.

Several channel feedback techniques have been proposed for massive MIMO systems. Specifically, compressive sensing (CS) based channel feedback scheme exploiting the sparsity of angle-domain channel has been proposed for massive MIMO systems in [6]. The channel vector is compressed into a low-dimensional measurement vector by random projection, and fed back to the BS with low overhead. Then, the BS can recover the sparse angle-domain channel via CS algorithms. Structured sparsity in the multi-user MIMO channel matrix can be exploited to further improve the channel recovery performance at the BS.

II. MASSIVE MIMO SYSTEM MODEL

In this section, we introduce the massive MIMO downlink channel model and the channel feedback

HOME AUTOMATION THROUGH FIELD PROGRAMMABLE GATE ARRAY

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Abstract:

In recent years, the home automation has seen a rapid introduction of network enabled digital technologies. Home automation involves introducing a degree of computerized or automatic control to certain electrical and electronic systems in a building. This device had been modelled such that it takes care of home intrusion detection and avoidance .While it also controls other home environment factors such as temperature and smoke detection. A sequential pattern of controlling the door, burglar alarm, temperature and luminosity is followed in a priority order .In this project we introduced an efficient design of home automation system using Verilog HDL and a possible solution where the user controls device by employing a central FPGA controller to which the devices and sensors are interfaced .We simulate the design in Verilog HDL using Xilinx .We also got the RTL schematic which shows that it can be work on hardware.

Key words: Xilinx ISE 14.5, FPGA,sensors, Synthesis and Simulation

Objective:

Our objective is to design a FPGA based home monitoring system. We are using the FPGA other than the micro controller because we can connect many devices which can be monitored and the FPGA can be used as a controller or a processor. The design has been described using Verilog and implemented in hardware using FPGA (Field Programmable Gate Array).

I. Introduction:

Home automation is building automation for a home, called a smart home or smart house. A home automation system will control lighting, climate, entertainment systems and appliances. It may also include home security such as access control and alarm systems u8uconneted with the internet, home devices are an important constituent of the internet of things.

A home automation system typically connects controlled devices to a central hub or gate way. The user interface for control of the system uses wall-mounted terminals, tablet or desktop computers, a mobile phone application, or a web interface, that may also be accessible off-site through the internet.

II. Literature Survey:

In 2001 **Bluetooth based home automation** was developed. Due to its Slower Response, complex design and large hardware another type of home automation i.e. **Microprocessorbased home automation** was developed in 2002 .Because of its large programming, multiple IC's we further proceed to **Network monitoring** home automation was developed in 2007.Due to its easily hackable and less feature we further

LOW POWER FULL ADDERS BY EXPLORING NEW EX-OR AND

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Abstract-This paper shows novel circuits for EX-OR/EX-NOR and their functions. These circuits are reduced in power consumption, that are because of low output capacitance and low short-circuit power dissipation. We have additionally proposed four new hybrid 1-bit full-adder circuits. Each of the projected circuits has its own deserves in terms of speed, power consumption, driving ability, and so on.To research the performance of the projected styles, intensive TANNER simulations are performed. The simulation results, supported the 180-nm, 130-nm, 90-nm and 45-nm CMOS method technology model, indicate that the projected styles have superior power against alternative designs.With the projected technique, 1-bit,2-bit and 4-bit comparators are implemented and simulated.

Index Terms— Power Consumption, power delay Product, Full Adder,Comparator.

1. INTRODUCTION

Electronic systems are associated with lifestyle. Digital circuits like microprocessors, electronic communication devices, and digital signal processors and so on comprise an oversized half of electronic systems. As the size of integration will increase, the ease of use of circuitsis confined bythemagnifying amounts of power and space consumption. Therefore, with the growing quality and demand for the battery-operated moveable devices like mobile phones, tablets, and laptops, the designers try and scale back power consumption and space of such systems

This can be done by optimizing the W/L ratio of transistors which reduces the power consumption of the overall system whereas preventing the issues resulted from reducing the availability voltage.

The potency of the many digital applications appertains to the performance of the arithmetic circuits, like adders, multipliers, and dividers which play the basic role of addition. Standard CMOS complementary pass-transistor logic (CPL) transmission gate (TG) transmission operate 14T (14 transistors) and hybrid pass logic with static CMOS output drive full adder (HPSC).FAs are the foremost vital full-swing families. Nonfull-swing class includes of10T,9T,and 8T.

In this paper we have simulated the different Ex-or/Ex-nor gates, Full adders and different Comparators.

2. REVIEW OF EX-OR/EX-NOR GATES

The power utilization of the every cell in any electronic gadget might be diminished by optimum coming up with of the EX-OR/EX-NOR gate. The EX-OR/EX-NOR gate has conjointly several applications in digital circuits style. Several circuits are planned to implement EX-OR/EX-NOR gate and the figures 1(a),1(b),1(c),1(d),1(e),1(f) and 1(g) are implemented using different CMOS logics

Four Element MIMO antenna for K band and Ka Band Applications

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Abstract:

The advancements in communication explode wide range of customized applications and in turn, demands expansive transceivers. Various antenna designs are used for specific applications. In this project, MIMO models are implemented to achieve frequency range from 25GHz to 35GHz (Kband (25GHz to 26.5GHz and Ka-band (26.5GHz to 35GHz).Without using any decoupling circuit to reduce the mutual coupling between the antenna elements. The portability is achieved in this design. The performance of the MIMO antenna is analyzed using the envelope correlation coefficient and diversity gain.

Keywords- K & Ka-band; defected ground structure-DGS, mutual coupling, envelope correlation coefficient (ECC).

I.INTRODUCTION

The modern wireless communication requires the enhancement of high data rates and efficient communication. The MIMO (Multiple Input Multiple Output) technologies provide high data rates and high throughput [2]. The efficiency of MIMO antenna is high when the mutual coupling and correlation are very small. When the spacing between antennas decreases the mutual coupling increases. Although, this problem may be reduced using decoupling or matching circuits. But the complexity of the circuit increases and the portability decreases. The number of antenna elements is required to increase the channel capacity. The design of antenna using MIMO technology in portable devices refers to designing antennas with low mutual coupling.

The four element MIMO antenna array configurations with decoupling circuits are proposed [3-7]. In order to increase the isolation between the antennas elements the antenna elements are to be placed orthogonally along with some decoupling circuit are used [2], [4], [8].The K band and Ka-band provides high throughput, large spectrum band and more susceptibility to rain fading. The design of the K band and Ka-band antenna requires a small size. The K band and Ka-band radar, satellite applications in microwave domain and astronomical applications in the infrared domain. The MIMO antenna performance is represented by parameters such as ECC, TARC, and DG. When the designed antenna results are within the acceptable range then the antenna performance is good. In this paper, a four-element MIMO antenna for K band and Ka-band applications with high isolation without the use of decoupling or matching circuit is proposed. The proposed design has the dimensions of 32×32. The design covers the frequency range of 25GHz to 35 GHz. CPL and DPL techniques at the frequency of 100MHz.

II. MIMO ANTENNA DESIGN

The antenna design consists of structure evolved from circular monopole antenna which is given microstrip feed. The size of each antenna element is 16×16. The dielectric substrate used for the fabrication is Neltec NH9320 with relative permittivity 3.2 and loss tangent 0.0024. The height of the dielectric substrate is 0.762mm.

The stepwise construction of the antenna element using the microstrip feed along with dimensions of the patch, the feed is as shown in figure 1. Figure 1(a) observed the top view and bottom view of a single antenna element. Figure 1(b) observed the steps required for the construction of an antenna element.

ESTIMATION OF DIFFERENT PARAMETERS IN CELLULAR MOBILE COMMUNICATION

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Abstract: Now a day, Mobile technology is a form of technology that is mostly used in cellular and mobile communication. We have to increase the capacity of channel in cellular communication. In Cellular and mobile communication, Co-channel interference ratio, capacity of cell are the important parameters in cellular mobile communication. Aim of our project is to estimate the co-channel interference ratio(C/I) and capacity of the cell in a cellular mobile communication. To compare co-channel interference ratio and capacity with different cluster sizes. As the cluster size increases then co-channel interference ratio is increases and. As the cluster size increases then capacity of the cell decreases. The parameters which we calculated in this project are co-channel interference ratio, Distance between two co-channels in the cell, and Total number of channels in a cell. We calculated here the Distance between vehicle and base station depending upon parameters. Based on received power (Pr), we calculated how far the vehicle is away from Base station.

Keywords: Co-channel Interference Ratio, cluster, Co-channels, Base station.

1. INTRODUCTION

CELLULAR MOBILE COMMUNICATION:

A mobile phone is a portable telephone that does not use a wired connection. It is also known as a wireless phone, cell phone, or cellular telephone. In many developing countries, mobile technology is a substitute for traditional fixed services. Worldwide the number of cellular phone users in the years 1984, 1994, and 1997 were 25,000, 16 million, and 50 million, respectively. In 2000, the number of wireless users became equal to the wired users and this number increased to 1.9 billion worldwide in the year 2005. The number of mobile users increased to 3 billion by 2007, which is almost half of the world's population.

2. CELLULAR PARAMETERS:

To increase the capacity of channel in cellular communication, we are estimated parameters in cellular mobile communication. In Cellular and mobile communication, Co-channel interference ratio, capacity of cell are the important parameters. Some of the list of parameters are discussed below:

LIST OF PARAMETERS:

2.1. Cluster

2.2. Co-channel Interference

2.3. Capacity of the cell

2.4. Distance between two co-channels

2.5. Total Number of channels in a cell

2.6. Power control algorithm

AUDIO AND TEXT TRANSMISSION USING LI-FI TECHNOLOGY

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Abstract: Li-Fi stands for Light-Fidelity. The technology is very new and was proposed by the German physicist Herald Haas in 2011. Li-Fi provides transmission of data through illumination by sending data through an LED light bulb that varies in intensity faster than human eye can follow. The term Li-Fi refers to visible light communication (VLC) technology that uses as medium to deliver high-speed communication in a manner similar to Wi-Fi. Li-Fi provides better bandwidth, efficiency, availability and security than Wi-Fi. Li-fi is a technology that makes the use of LED light which helps in transmission of the audio and text signal much faster and flexible than data that can be transmitted through WI-FI. In Li-Fi, the data is transmitted in several bit-streams through high-speed flickering of the LED bulb and decoded on the receiver side which consists of a photo- detector. This happens in the form of a binary transmission of data, where '0' is the LED in its 'off- state' and '1' is the LED in its 'on-state'. In this paper, we use this concept to transmit data to demonstrate the use-cases and the possible impact it can have in the ever- growing field of communication. In this paper, we transmit two types of data i.e Audio and Text using Li-Fi

Keywords: Visible Light Communication. Data transmission; Li-Fi.

1.Introduction

The demand for data usage has increased exponentially in the last decade, people want to be connected to the Internet all the time, on multiple devices, update the latest happenings etc. With the advent of IoT more devices will connect to the LTE which will result in congestion and decrease in speed. To solve this crisis, multiple options were considered and one was to utilize the unused visible light spectrum which gave rise to the new concept called Li-Fi.

These LED's have high switching speeds that enable them to modulate according to the stream of bits that are sent. This transmission takes place in a parallel stream such that more data is being transmitted simultaneously. The switching speed is too fast to be visible to the naked eye and thus this transmission is not noticeable. This technology was proposed by German physicist Harald Haas in University of Edinburgh.

Li-Fi, at its core is light-based Wi-Fi with the main difference is that it uses light instead of radio waves to transmit data. The Li-Fi system would consist of regular, off-the-shelf, LED bulbs that provide internet or data transmission as well as illumination. It utilizes the visible light portion of the electromagnetic spectrum (380 nm to 780 nm). Thus, it has 10,000 times more space available thus more available bandwidth is present. Theoretically, it can reach the speeds up to 224 Gbps. [4]

2. Related Works

This section discusses the various advantages of VLC and elucidates on the differences between Li-Fi and Wi- Fi. By the year 2020, 10 billion devices will be subscribed in the LTE, which would result in an exponential growth of wireless traffic demand and result in a congested, scarce, and expensive RF-spectrum. The last few generations like 2G, 3G, etc., there have been many conventional methods employed to improve the capacity of the spectrum like spatial re-use and inter-cell interference coordination. Li-Fi can play a major role in relieving the heavy loads which the current wireless systems face since it adds a new and unutilized bandwidth of visible light to the currently available radio waves for data transfer. [7]. Visible Light Communication may also be used to complement current RF systems as Li-Fi will guarantee safer networks and higher speeds. In offices and schools the maximum data is exchange happens within the same building. Usage of Li-Fi system along with the 5G Wi-

CBIR Based On SURF With Color Histogram

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ABSTRACT: **Searching and browsing through image collections have become import with the ever increasing image database from different sources including industry, military and civilians. CBIR involves various approaches to retrieve image by considering content of images, such as colour texture, shape features. Most of the Content based image Retrieved systems are designed based on low-level features for indexing and Retrieved of images. These systems cannot satisfy user expectations because of the gap between the low level features used by such systems and the high level perception of images by humans. As an attempt to reduce this gap, instead of SURF, SIFT and local histograms is used with HSV partitioning. SURF is used for gray images. HSV partitioning is used to represent color distributions in the image. Maximum color of each partition which is obtained from histogram of each partition and HSV of the corresponding pixel is used as feature. Color features and SURF feature are also used as similarity measure performance is compared with SURF, SIFT. The retrieval performance observed based on precision and recall measures. Based on precision and recall measures the performance SURF with color histogram is better than SIFT and SURF .**

Keywords: CBIR, SIFT, SURF,HSV

I. INTRODUCTION

Digital images are playing a major role in the society. From different ends like the government, hospitals, industries, etc huge databases are created and maintained. To retrieve images from these databases, CBIR has become the popular method. It uses the features of the images like color, texture, shape, etc. Image processing operations such as rotation, translation and image matching using partially invariant illumination detector, such as SIFT is a reliable descriptor for above operations. To implement efficient images SURF with color histogram are utilized based on CBIR. This paper presents and investigates the applicability of SURF with color histogram based on CBIR.

II. SURF WITH COLOR

SURF with color histogram is a local descriptor useful for matching between different views of an object.SURF algorithm is used for detecting, extracting and for matching the feature points with respect to geometric transformations. This method internally consists of different stages as follows.

1.Scale space extreme and key point localization:

To detect the Extreme for different space scale vectors in images we need to convolve the images with Gaussian blurs. To obtain the maximum and minimum from the convoluted images we need to calculate Difference Of Gaussian (DOG) images from different scales. Based on the pixel comparison from the DOG images we could obtain Maxima and minima.

2.Orientation Assignment with Haar wavelet:

In the first step of the SURF descriptor, to extract the feature points, fix a reproducible orientation based on information from a circular region around the interest point. After, it built a square region aligned to the selected orientation.By calculating the sum of all responses within a sliding orientation window which covering a 60 degree, the dominant orientation is estimated.

3. Key point descriptor(feature extraction):

The key points are obtained by computing the descriptor vector even if they are slightly invariant to differences in light and 3D point of view and is peculiar. The resultant vector is brought in normal state to unit length to further improve the quality of invariance to connect with different variations in illumination.Previous steps found key point locations at particular scales and assigned orientations to them. This ensured invariance to image location, scale and rotation.

4.RGB to HSV Conversion:

The RGB coordinates can be easily translated to the HSV space. The three color characteristics, hue, saturation, and value or lightness, are defined to distinguish color components. Hue describes the actual wave length of the color by representing the color name.Conversion Formulae:

$$H = \cos^{-1}\left\{\frac{\frac{1}{2}[(R-G)+(R-B)]}{\sqrt{(R-G)^2+(R-B)(G-B)}}\right\} \quad \ldots\ldots\ldots (1)$$

Where, R, G and B represent red, green and blue components respectively with values between 0-255.

5.Partitioning the Image:

After conversion from RGB to HSV the next design parameter is the quantization of the color space. The HSV color space is cylindrical. The long axis represents value: blackness to whiteness. Distance from the axis represents saturation: amount of color present. The angle around the axis is the hue: tint or tone. Since hue represents the most significant characteristic of the color, it requires the finest quantization.

6.Hue histogram(feature vector):

Hue represents color distribution on every partition. After extracting this color distribution information hue histogram is computed for each segment. hue histogram is computed for 16 bins. From that histogram we can easily detect the color occurrence in each Partition. Here total 90 histograms were found. Then from each histogram the maximum color occurrence for each partition is found and it used to compute the feature vector.

7.Euclidean distance:

Euclidean distance is one of the similarity measurement techniques. Feature vector is used for

DESIGN OF POWER EFFICIENT APPROXIMATE MULTIPLIERS

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ABSTRACT:

Approximate computing has been hailed as a rising strategy in power saving and error tolerant applications. In this paper a new method for designing approximate multipliers is proposed. The partial products of a multiplier are transformed in to propagate and generate signals. OR gates areutilized to get propagate signals and AND gates are used to get generate signals. An approximate half adder, adder, approximate full adder and approximate 4_2 compressor are used to reduce the partial products. Two varieties of 16 bit multipliers are produced. They have better accuracy than the existing approximate multipliers.

1. INTRODUCTION

In error resilient applications like image processing, audio processing, scientific computing and data mining the exact computing units are replaced with inexact computing units. Approximate computing is a technique which generates a possible inaccurate result rather than an exact accurate results. Multipliers are key components in many applications. Multiplier plays a crucial role in deciding the speed and power consumptinn of a processor. So an approximate multiplier is an attractive alternative to an exact multiplier when it comes to trading off quality with power consumed. The performance metrics needed to evaluate the efficiency of approximate designs are Error distance, Normalized error distance, Power delay product, and Area power product. Error distance can be defined as the arithmetic distance between a correct output and the generated approximate output for a given input. The NED is defined as the normalized value of mean error distance (MED) by the maximum output of accurate design. Mean relative error is defined as the mean value of the relative error which is absolute error divided by the accurate result. Power delay product is a figure of merit correlated with energy efficiency. In [1] Broken arraymultiplier is implemented which is similar to an array multiplier. A Broken array multiplier breaks the carry save adder array and omits some cells that lead to a saving in few adder circuits. In [2] two designs of approximate 4-2 compressors are proposed and used in partial product reductiontree. The Design 2 has the best delay, power consumption and PDP as compared to design 1. But there is major drawback associated with it. They give an non zero output for zeroed values input which effects mean relative error. All the previous works on approximate multipliers are focused on direct application of approximate half adders, full adders and 4-2 compressors to partial products. But in these brief partial products are modified to introduce changing probability terms. The probability statistics of this propagate and generate partial products a reanalyzed which is followed by a systematic approximation. The arithmetic circuits like (half adder, full adder and 4-2 compressor) are designed for approximation. The arithmetic circuits thus designed have less design complexity but they are also designed by keeping in mind that the error value must be low. The reduced design complexity of the half adders, full adders and 4-2 compressors give low power consumption and systemic approximation helps in achieving better accuracy. The proposed technique for generating approximate multipliers outperforms the existing multiplier designs in terms of area, power and error.

2.EXISTING SYSTEM

Design1

For this design, we approximate the result by making Carry'=Cin with this modification the carry output in an exact compressor has the same value as that of input Cin. In this, the carry is simplified to Cin by changing the value of the other eight outputs. Since the Carry output has the higher value of a binary bit, an incorrect value of this signal will give a difference value of two in the output. For example, if the input pattern is "01001" the correct output is "010" that is equal by modifying the carryout put to Cin, the approximate compressor will produce the "000" pattern at the output (i.e., a value of 0). This significant difference may not be tolerable; however,

Fault Detection Method In NoC Routers

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***Abstract*— In the Network-on- chip, Communication takes place interms of packets i.e., by sending and receiving packets. This paper presents a method to detect the faults in FIFO buffers of NoC routers. In this method, fault detection tests will be performed after certain period of time repeatedly. The test method can be implemented in the architecture itself. After implementing the test method, the performance of NoC routers can be analysed interms of various parameters like throughput etc.,**

***Index Terms*—FIFO buffers, NoC routers, fault, test algorithm.**

I. INTRODUCTION

The network on chip is an effective architecture in the communication system under the system on chip. Network on chip is a scheme for organizing communication between operating modules located on the same chip. It is aimed at combining computing cores of varying purposes (executive, graphics, physics, etc.), device controllers, ROM and RAM modules, stand-alone devices, sensors, and much more that can be placed on silicon crystals. Currently, NoC is one of the most promising areas for the development of microprocessor technology in general and single-chip systems in particular.

As the complexity of design increases and technology scales down into the deep sub micron domain ,the probability of malfunctions and failures in the network on chip components increases.network faults are associated with failure of network components such as routers and links. For the last few years, network-on-chip (NoC) has emerged as a better communication infrastructure compared with bus-based communication network for complex chip designs overcoming the difficulties related to bandwidth, signal integrity, and power dissipation [1].

Most of the area in the NoC infrastructure consists of routers. Mainly routers consists of the buffers and it also has routing logic. Most of the faults occur in buffers when compared to remaining components of the Network on Chip.

In the process of testing the net work on chip must begin with testing of routers which contain buffers and routing logic. The cmos based memories are mainly affected as a result of physical effects such as environmental conditions,aging of memories and low supply voltage,and the faults due to such conditions are called as intermittent faults.

The intermittent faults tend to be permanent during run time operation. So there is a need for online test technique that can detect runtime faults which become permanent as the time flows.

To detect the run-time faults, we need online techniques for testing.

A. Proposed method

To detect the run time faults, online test technique is proposed in this paper for first-input first-output buffers of Network on Chip routers. A transparent "Single Order Address-Modified Algorithmic Test Sequence" test generation algorithm has been proposed in this paper to detect the faults in FIFO memories and the test will be performed for every certain period of time.

B. Different Fault Models

In this study, we have to assume the run-time faults as intermittent faults which occur at irregular intervals. Intermittent faults occur due to aging effects, like breakdown, electromigration, temperature instability and hot carrier injection mentioned in [2]. Breakdown is a phenomena where the oxide of a MOSFET degrades which results in a short circuit. These are called stuck-at-faults [3]. Due to Electromigration, conductivity decreases and causes open circuit [3]. These are called stuck-open-faults. Due to thermal instability and hot carrier injection, the threshold voltage of transistors increases and mobility decreases.So there is a chance of read and write failures which are also known as read disturb faults and transition faults respectively.[4].

II. RELATED TECHNIQUES

Fault tolerance is the property that enables a system to continue operating properly in the event of the failure of some (one or more faults within) of its components. It is very important in the design of Network-on-Chip. There are number of techniques to test the Network-on-Chip infrastructure like DFT and BIST. We can refer the corresponding work which is provided in [6][7]. The detailed study of DFT technique, different test techniques, fault tolerant routing algorithms are also proposed in [8][9].

There are large number of FIFO buffers in NoC infrastructure. So there is a chance for more number of faults for the buffers than that of the other components.

MONITORING AND CONTROLLING OF MUSHROOM CULTIVATION THROUGH IOT

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Abstract:

Agriculture sensors play an important role in modern agriculture. The use of sensors in various agriculture sectors minimizes the environmental impact on crops, helps in increasing yield and saving cost of operation. Among all agriculture industries,the mushroom industry is a comparatively new and small. As most of the mushroom farms are small-scaled, their production capability is limited by inadequate environmental control system and the lack of financial resources to upgrade the systems. This project presents an environmental monitoring and controlling system using ARM Processor to monitor and control the environmental conditions like Temperature, Humidity,Light intensity in a mushroom farm using Internet of Things. It enables user to monitor temperature and humidity in a mushroom farm on an android device by using online platform UBIDOTS. The control algorithm is able to control devices in a mushroom farm automatically based on feedback from the sensors to maintain the environment in an optimum condition for mushroom growth.The parameters are displayed in farming room using OLED display.

Keywords:ARM Processor,Internet of things,Sensors,UBIDOTS,OLED Display

1.INTRODUCTION

Mushrooms are classified as vegetables in the food world, but they are actually fungi. Although they are not vegetables, mushrooms provide several important nutrients and they have a very important part in the food market.Mushrooms are enriched in nutrients and they possess medical benefits such as decrease the risk of obesity and overall mortality, diabetes, and heart disease. They also promote a healthy complexion and hair, increased energy, and overall lower weight. In India large percentage of population depends on agriculture. Mushroom industry is new and small scaled as compare to other agriculture industry in India.The mushroom cultivated and processed by means of manual methods such as from spawn production to packing, which results the mushroom cultivators to spend more time and difficult to maintain hygienic conditions and required temperature , humidity.Thus chances of occurrence of pests and diseases are much more which sometimes damages mushroom crop to a great extent thereby leading to an severe loss to the cultivator.Therefore, with the introduction of IOT and use of sensors in various agriculture sectors have huge positive impact in modern agriculture which helps in increasing yield and saving cost of operation and same can be applied to the Mushroom Cultivation.

2. LITERATURE SURVEY

Arjuna Marzuki and Soh Yan Ying[1] proposed an interface circuit for agriculture sensors which includes a monitoring function, which enables user to monitor temperature, humidity, carbon dioxide concentration and light intensity in a mushroom farm wirelessly, and a control function, which is able to control the condition in the mushroom farm, based on the feedback of the sensors.The monitoring system was able to acquire sensor data and send the data to ThingSpeak online cloud for monitoring and storage. The data could be accessed by the user anytime by using a computer that is connected to the Internet.The control system was able to control ac-powered humidifier, light and fan based on the feedback of the sensors to maintain temperature, humidity, carbon dioxide concentration and light intensity at optimum growth condition in an actual mushroom farm.

Wang X. [2] has proposed temperature and humidity monitoring system using AT89S52 as the controller, SHT10 as temperature and humidity sensor and TC35i GSM (Global System for Mobile communication) Module for wireless communication. The system is able to detect temperature and humidity and display via a Nokia

OPC BASED SCADA SYSTEM IN VISAKHAPATNAM STEEL PLANT

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Abstract:

SCADA (Supervisory Control and Data Acquisition) is the most modern tool used for the control and monitoring of technological processes. The main components of SCADA systems are one or more Servers and the Client (the Viewers).The OPC(OLE-Object linking and embedding for Processes Control) aims to define a common interface with a single designing stage and multiple reuses for any other project, SCADA, HMI(Human Machine Interface) or other software package. An OPC server is an application which functions as an application programming interface (API-Application Programming Interface) or protocol converter. The paper presents an example of OPC server based application software which can be embedded into a SCADA system and which performs the following applications monitoring a quasi-general industrial process defined by a 2nd order transfer function, Identifying the transfer function and managing the client-server communication of the quantities of interest by online viewing and creating a record using TDMS (Technical Data Management Streaming) files, a MySQL database server and allowing the display of data on the Intranet/Internet through via a web Server which is embedded in the application.

Key words: SCADA Software, RTUS, Master station, Unity pro software, CitectSCADA software.

I. Introduction:

OPC (OLE for Process Control) Server and Client Interface:

The SCADA server shall be loaded with OPC Data Access 2.0 Server or higher version so that OPC Data Access Client can fetch necessary data from SCADA server. The SCADA system shall have not redundant servers. SCADA server shall also have OPC Client interface so that any third-party OPC server information can be mapped into the SCADA Client interface to either of the versions 1.0, 2.o or 3.0 of OPC Data Access Server.

Level-1 and substation automation system of various process plants shall be OPC compliant of any third party make like wonder ware (in touch), Intellection (ifix), ABB(operate IT),Honeywell (exertion),GE (simplicity), Siemens (wince/PCS7),Rockwell Automation (Rs-View), Alstom (Cogito) etc.

Basic philosophy for Connectivity of SCADA system with various automation systems.

The new SCADA system shall be suitably connected as indicated below to different substation Automation systems (SAS) and Level-1 automation systems which will be supplied by package supplier.

The signals generated at various points of different plant units will be collected at Substation Automation System, Level 1 Automation System and RTUs(PLCs) which will act as frontend units to be integrated with the SCADA system .The connections between the SAS,Level-1 Automation System, RTUs (PLCs) and SCADA System will be Through fibre optic based Ethernet LAN.

Connectivity with Substation Automation System and package Level-1 Automation System shall be done as follows:

Where Substation Automation System/HV Switchboard of a unit is located in the vicinity of Level-1 /Level-2 automation system of a package, the substation automation system shall be connected to the package Level-1 system through OPC over Ethernet network. The relevant parameters like pressure, flow, temperature, current, voltage, power, frequency etc. shall be collected from Level-1 system through an OPC server/gateway to be provided by the respective package supplier. The proposed connectivity is indicated in the figure-2.

Connectivity with Substation Automation Systems Where Package Level-1 Automation System is not available shall be done as follows:

The PC based SAS will be provided by others including the installation of OPC server

An Efficient Programmable Logic BIST Module

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Abstract

This paper mainly focuses on the testability of chips. System on chip designs become complex with each generation so that the acceptable amount of test data required is proportionally very large .Hence the test data storage requirements on an external tester and test data bandwidth requirements between the tester and chip are grown rapidly. Test data compression techniques provides a means to reduce these requirements there by allowing less expensive testers to be used .More over it reduces the test time. Logic Built In Self Test (BIST) means solution for testing the digital logic components of integrated circuits. BIST structure includes Linear feedback shift register (LFSR), Multiple input shift register (MISR), Phase shifter and compactor. LFSR plays the role of test pattern generator in logic BIST.MISR is commonly used as an output response analyzer. Compactor is used to reduce the length of the bits. BIST is better than the Automatic Test Equipment (ATE) because complexity and hardware requirement is less. The application of BIST is the security of testing structures, automotive electronics, and integrated circuits.

Keywords: LFSR, MISR, SOC, BIST, ATE.

I. Introduction

In the last three decades, the world of electronics has been expanded exponentially both in productivity and performance. Testing and reduction in cause are the most attractive features of the logic BIST structures compared to the ATE testing [1]. IC industry has followed a steady path of constantly shrinking the device dimensions and hence increasing the density of chips. Logic built in self test (LBIST) is a form of Built in self test in which hardware or software is built in to integrated circuits allowing them to test their own operation. A Built in self test technique constitute a class of algorithms that provide the capability of performing at speed testing with high fault coverage, whereas at the same time they relax the expensive external testing equipment. These BIST methods are a vivid and practical solution to the problem of testing circuits and VLSI systems. This BIST works on the test mode or scan mode.

In the test mode, the input signals generated by the test generator module are applied to the inputs of the tested circuit (CUT), and the results to the response verifier. Therefore, to perform the test, the normal operation of the CUT is inhibited and consequently, the performance of the system in which the circuit is turned on is deteriorating. To exclude this performance degradation, parallel BIST methods were proposed that use input vectors fed to the CUT inputs during normal operation.

II. Typical logic BIST architecture:

Logic BIST is an extra testing circuitry embedded in the chip that perform structural based test after manufacturing. FIG-1 shows the block diagram of logic BIST architecture. It includes LFSR, Phase shifter, CUT, MISR, TRA, BIST controller, Space compactor.

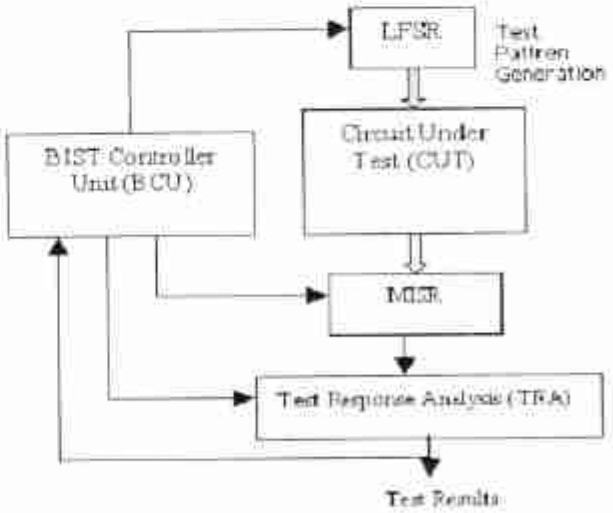

Fig: 1.1 Logic BIST architecture

Design and Analysis of Low Power SRAM cells

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***Abstract*– The rapid growth of portable battery operated devices has made low power IC designs a priority inrecent years. So embedded SRAM units have become an integral part in modern SoCs. In PSEUDO NMOS the power consumption is high but it occupies less space. Conventional SRAM cell designs are power hungry and poor performers in this new era of fast mobile computing. In this paper, low power SRAM cell designs have been analyzed for power consumption. Gated VDD, MTCMOS design techniques and Adiabatic have been employed to reduce the power consumed by the SRAM cell. These designsarecomparedwiththeconventional6TSRAMcell. The results show that the Adiabatic SRAM cell is the best performer in terms of powerconsumption.**

***Index Terms*– Pseudo NMOS;low Power SRAM; Gated Vdd SRAM Cell, MTCMOS,MTCMOS SRAM Cell; 6T SRAM; Adiabatic SRAM; Power reduction in SRAM cell.**

I INTRODUCTION

In the period of quick advancement and useage of portabledevicesbatterylifeisamajorconcern.Energy efficient hardware architecture is required in newdevices like smart watches, small sensor nodes, wireless communication suits,etc .Random Access Memory (RAM) Integrated circuits are used virtually in every digital system and so energy efficient RAM architecture will have a positive impact on the overall system.Static Random Access memory (SRAM) cells don't require constant refreshing to retain its contents as long as power is supplied to the cell . This real favorable position of SRAM is the motivation behind why it is favored over Dynamic random Access Memory (DRAM). SRAM's integration with standard CMOS innovation offers it the chance to turn into the most noteworthy area consumer on system on Chips (SoCs).

The ordinary 6-transistor (6T) SRAM cell is broadly utilizedessentiallyduetoitsbasicplan.The6TSRAM cell is great entertainer regarding power [1]. Anyway further examination of the ordinary 6T SRAM engineering demonstrates a ton of opportunity to get betterasfaraspowerutilization[2].In[3],twoSRAM cells are presented: one structure using NMOS pass transistors to diminish gate leakage current and the other structure using PMOSpass transistor. Furthermore, Dual Threshold Voltage innovation with forward body biasing is utilized, revealing a significant decrease in power with an extremely slighttimecorruptionof2%.[4],[5],[6],and [7] present different power decrease methods in CMOS circuits concluding Adiabatic as one of the stand out method to combat leakage power.

In this paper, various SRAM cells have been planned and analyzed for power consumption. Gated Vdd, MTCMOS and Adiabatic plan methods have been utilized to contrast the power parameters and those of the traditional 6T SRAM cell.

II EXISTING METHOD

2.1 Pseudo NMOSLogic

In CMOS logic it occupies larger than than NMOS gates .Due to the larger area, they have larger capacitance. Where larger capacitance leads to longer delay in switching The limitations of the CMOS gates can be reduced by several alternative techniques like Pseudo-NMOS logic, Dynamic logic and Domino logic.

Figure 1: Pseudo NMOS logic

In Pseudo-NMOS logic it uses a p-device pull-up or load that has its gate permanently ground shown in figure 1. An n-device pull-down or driver is driven with the input signal. This roughly equivalent to use of a depletion load is NMOS technology and is thus called as 'Pseudo-NMOS'

The P-NMOS circuit is a modification of NMOS circuits with DMOS loads. In P-NMOS circuits, we use a PMOS transistor, instead of the DMOS

Design and Analysis of Low Power SRAM cells

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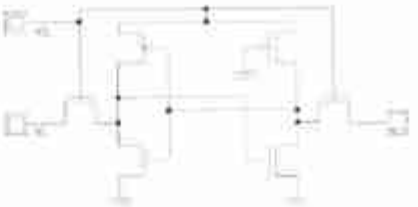

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IMPLEMENTATION OF HAMMING CODE USING VERILOG

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Abstract— ***In digital communication while transmitting the data from source to destination some corruption in data occurs due to some environmental conditions, which is nothing but the transmitted data is included with some errors. Error coding is the method to detect and correct these errors so that the information is transferred without any errors from source to destination. There are many error detecting and correcting codes, one of such is Hamming code. Hamming code is single bit error detecting and correcting method. In this paper we are going to discuss about the implementation of Hamming code in verilog module which is improved version of previous existing technique. Both the techniques are implemented with the help of redundancy bits (does not carry information). The advantage of improved technique over the previous technique is there is decrease in the usage of bits while calculating the values redundancy bits.***

Keywords – Hamming code, Encoder, Decoder, Error detector and corrector, Verilog HDL, Xilinx

1. INTRODUCTION

In digital communication systems, environmental effects and other defects can cause random bit errors during data transmission. Digital data is transmitted over a channel and there should be a noise present in the channel. The noise may distort the data that is transmitting. Therefore, the data received by the receiver is not same as the data that is transmitted by the transmitter, so error detection and correction plays an important role so that the information is transferred without any errors.

2.LITERATURE SURVEY

2.1 ERROR : The encoded data is usually transmitted over a channel is not completely error free. Due to the external interference, signal distortion, attenuation and noise in channel the manipulation of data occurs. The manipulated data is called as error. There are two types of errors.

1. Single bit error
2. Burst error (more than one error in data).

2.2ERROR DETECTION AND CORRECTION :

The phenomenon of detecting the position of error from the received data is known as error detection. The process of correcting the bit value at that error position is nothing but error correction. There are various error detecting and correcting methods such as cyclic redundancy check (CRC), Parity check, Vertical redundancy check (VRC), Longitudinal redundancy check (LRC) and Hamming code. This work mainly focuses on Hamming code.

2.3. HAMMING CODE

Hamming code is a linear block code. Hamming code can detect up to 2 bit errors and correct can correct a single bit error. Hamming code includes encoding, error detection and correction and decoding. Encoding provides the encryption of data by adding redundancy bits to the data. The number of redundancy bits required are calculated using the formula

$$2^r >= d + r + 1 \quad \ldots\ldots\ldots\ldots \quad (1)$$

Where r = number of redundancy bits.

d = number of data bits.

The smallest value of 'r' that satisfies the above relation is considered as the number of required redundancy bits. Encoded data of length d + r bits is transmitted. In the receiving side, the presence and location of single bit error is determined by calculating the parities of combinations of received data to produce a table of parities each of which corresponds to a particular bit error combination. Now the value present in this error position is complimented so that the error is removed. Now this error free encoded data is decoded to get the original information data. Hamming codes are easy to implement and are used in telecommunication, and other applications including data compression. They are also used for low cost and low power applications.

3. PREVIOUS METHOD

3.1ENCODING OF HAMMING CODE :

FACE RECOGNITION USING CRF MODEL

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Abstract - In the present world scenario, where security is the primary concern, biometric system plays a vital role. Among the biometric traits, such as face recognition, iris recognition, finger print etc., face recognition system has high acceptability. In this project, a relatively new algorithm for face recognition system has been implemented. The conditional random field (CRF) and face geometry base method have been implemented in the face recognition frame work. The proposed method has been evaluated by considering the standard data bases which are popular among the researchers. The proposed method yields good results compared with the existing models.

Keywords: face detection, eigen face, PCA, recognition

1. INTRODUCTION

A facial recognition system is a technology capable of identifying or verifying a person from a digital image or a video frame from a video source. There are multiple methods in which facial recognition systems work, but in general, they work by comparing selected facial features from given image with faces within a database. It is also described as a Biometric Artificial Intelligence based application that can uniquely identify a person by analysing patterns based on the person's facial textures and shape.

Importance of FaceRecognition System as a Security Solution:-

Face is considered as the most important part of human body. Research shows that even face can speak and it has different words for different emotions. It plays a very crucial role for interacting with people in the society. It conveys people's identity, so it can be used as a key for security solutions in many organizations. Nowadays, face recognition system is getting increasing trend across the world for providing extremely safe and reliable security technology. It is gaining significant importance and attention by thousands of corporate and government organizations only because of its high level of security and reliability. Moreover, this system is providing vast benefits when compared to other biometric security solutions like palm print and finger print.Beginning with Bledsoe's [3] and Kanade's [4] early systems, a number of automated or semi-automated face recognition strategies have modeled and classified faces based on normalized distances and ratios among feature points. Recently this general approach has been continued and improved by the recent work of Yuille et al. [5].The approach has advantages over other face recognition schemes in its speed and simplicity, learning capacity.

2. Existing Methods

2.1 Face Recognition Using Fisher Face Algorithm:-

The Fisher faces method learns a class-specific transformation matrix, so they do not capture illumination as obviously as the Eigen faces method.
The Discriminant Analysis instead finds the facial features to discriminate between the persons.
It's important to mention, that the performance of the Fisher faces heavily depends on the input data as well.
Practically said: if you learn the Fisher faces for well-illuminated pictures only and you try to recognize faces in bad-illuminated scenes, then method is likely to find the wrong components (just because those features may not be predominant on bad illuminated images).
The Fisher faces allow a reconstruction of the projected image, just like the Eigen faces did.
But since we only identified the features to distinguish between subjects, you can't expect a nice reconstruction of the original image.
For the Fisher faces method we'll project the sample image onto each of the Fisher faces instead.
-The Eigen face method uses Principal Component Analysis (PCA) to linearly project the image space to a low dimensional feature space.
–The Fisher face method is an enhancement of the Eigen face method that it uses Fisher's Linear Discriminant Analysis (FLDA or LDA) for the dimensionality reduction.
-The LDA maximizes the ratio of between-class scatter to that of within-class scatter, therefore, it works better than PCA for purpose of discrimination.
-The Fisher face is especially useful when facial images have large variations in illumination and facial expression.

2. 2 Face Recognition Using Principal Component Analysis (PCA):

The task of facial recognition is discriminating input signals (image data) into several classes (persons). The input signals are highly noisy (e.g. the noise is caused by differing lighting conditions, pose etc.), yet the input images are not completely random and in spite of their differences there are patterns which occur in any input

OPTIMIZATION OF 2G/3G NETWORKS FOR IMPROVEMENT OF HANDOVERS

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Abstract- Mobility is the most important feature of a wireless cellular communication system. Usually, Continuous service is achieved by supporting handoff (or handover) from one cell to another.Handoff is the process of changing the channel (frequency, time slot, spreading code, or combination of them) associated with the current connection while a call is in Progress. It is often initiated either by crossing a cell boundary or by an deterioration in quality of the signal in the current channel. All the events being occurred over air interface are triggering different counters in the Base Station Controller(BSC). All GSM operators use Key Performance Indicators (KPIs) to judge their network performance and evaluate the Quality of Service (QoS) regarding end user perspective. In this paper, a well established real GSM handover analysis evaluation is presented. It has been focused to analyze the live network performance, irrespective of the discussions

and modeling available in the literature. Different issues, findings, trials and improvements have been summarized and observations/recommendations have been listed to correlate the practical aspects of handover, which increase the QoS of an operational cellular network.

Index terms *MS, TRX, BTS, BSC, MSC, OMCR,CSSR,CDR, HSR, TCH, KPI and QoS.*

1. INTRODUCTION

GSM network usually called as "cellular network"(as the whole coverage area is divided into different cells and sectors) is comprised of a mobile Station (MS) which is connected to the Base Transceiver Station (BTS) via air interface. In addion to other hardware, BTS contains the equipment called Transceiver (TRX), which is responsible for the transmission and reception of several radio frequency(RF) signals to/from the end user.BTS is then connected to the base station controller(BSC) via abis interface. BSC usually handles radio resource management and handovers of the calls from oneBTS (or cell/sector) to the other BTS (or cell/sector)equipped in it. BSC is then connected to Mobile Switching Centre (MSC). optimization teams ensure minimum blocking/congestion over air interface in order to provide better QoS to guarantee significant network performance. RF

Optimization teams used to analyze performance stats and evaluate QoS offered by the existing network. Since the deployment of GSM network, it has been observed practically that there are many phenomena and issues which have been neglected in literature/available text but they severely influence the network performance.

2. EVALUATION CRITERIA

GSM network performance and QoS evaluation are the most important steps for the mobile operators as the revenue and quality.Radio frequency network optimization (RNO) teams play a very significant and vital role in optimizing an operational network to meet the ever increasing demands from the end users.

Usually the following tasks are assigned to RNO teams:

1)To improve the existing network coverage and capacity.

2)To improve the offered service quality for fulfillment of customer demands.

3)To maintain the KPIs under pre-defined threshold.

4)To sustain the QoS criteria being imposed by country's regulatory authority.

ARDUINO BASED GESTURE TO SPEECH CONVERSION FOR THE MUTE COMMUNITY

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[1]Assistant Professor, [2,3,4,5,6]Student , Department of ECE, Sir C.R.Reddy College of Engineering, Eluru.

Abstract:

The mute community around the globe has a hard time while communicating with the rest of the world's population. This communication gap is there because a dumb person uses sign language which is not comprehensible by a normal person. This project mainly focuses on removing the barrier of communication between the mute community and the people not familiar with the concept of sign language so that the messages that a dumb person is trying to relay is understandable to a person with no knowledge of sign language. This design of the device id based on embedded systems.

Key word: IR sensors, Photo diodes, Arduino, Bluetooth module.

1.INTRODUCTION

Gesture to Speech Conversion is a tool for converting gestures of the differently abled people of the world to speech i.e. converting gestures input to speech output Gesture to Speech Conversion is a tool for converting gestures of the differently abled people of the world to speech i.e. convert gestures input to speech output. Proposed system is portable and focuses on two way communication. Main goal of the system is to convert hand gestures to auditory speech for communication between mute and normal people.

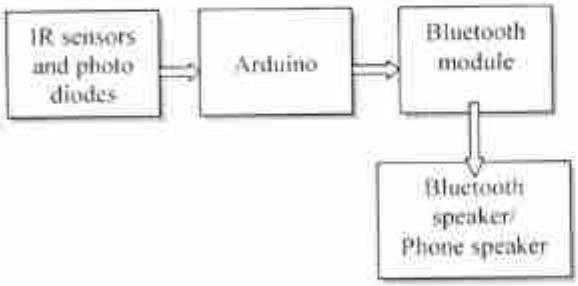

Fig: 1 Block diagram

There are 5 photo diodes that are used. Each photo diode is connected to different pins of Arduino IDE which is the controlling unit. Now the Tx and Rx pins of Arduino are connected to Rx and Tx pins of the Bluetooth module HC-05 respectively. Now, the Bluetooth module is connected to a Bluetooth speaker of an app in mobile phone to give a speech output.

2. LITERATURE SURVEY

Rajaganapathy.ete.lt says that the motive of the paper is to convert the human sign language to Voice with human gesture understanding and motion capture. This is achieved with the help of Microsoft Kinect a motion capture device from Microsoft. There are a few systems available for sign language to speech conversion but none of them provide natural user interface. For consideration if a person who has a disability to speak can stand perform the system and the system converts the human gestures as speech and plays it loud so that the person could actually communicate to a mass crowd gathering. Also the system is planned in bringing high efficiency for the users for improved communication.

Ms.ShubhangiG.Shinde.ete.lt says that Human computer interaction plays vital role in daily life and in automation industry and we are always looking for more convenient ways of interaction to transfer data to the machines or commanding them faster and easier. This work presents real time Hand Posture Recognition Using K-NN Classifier consists of three major steps: image preprocessing, feature extraction and gesture classification. Noise is removed using, morphological closing operation with Gaussian filtering and background Subtraction by Histogram. Feature extraction done by Local Binary pattern and Gray Level Co-occurrence Matrix (GLCM) by extracting texture feature. For the classification KNN function is used and performance analysis of classification algorithm is carried out on the basis of cross validation accuracy. The system is implemented with a dataset of 500 images of 10 different hand postures which are 10 Sign Language.

PrincesaCloutier.ete.lt Communication between speakers and non-speakers of American Sign Language (ASL) can be problematic, inconvenient, and expensive. This project attempts to bridge the communication gap by designing a portable glove that captures the user's ASL gestures and outputs the translated text on a Smartphone. The glove is equipped with flex sensors, contact sensors, and a gyroscope to measure the flexion of the fingers, the contact between fingers, and the rotation of the hand. The glove's Arduino UNO microcontroller analyzes the sensor readings to identify the gesture from a library of learned gestures. The Bluetooth module transmits the gesture to a

SMART IRRIGATION SYSTEM USING RASPBERRY PI

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ABSTRACT : Many advanced techniques introduced in agriculture automation to flourish and deliver its full potential. To get more benefits of these technologies, we should not just consider the implication of developing a new single technology but should look at the wider issues for complete development of a system. This system designed by using Raspberrypi to overcome limitations of agriculture farming about supplying of water to plants by drip system with the available water tables. With this system we can control all the parameters like temperature, humidity, soil moisture.

KeyWords:
Raspberrypi,.Temperature,Humidity,motors,sensors.

1. INTRODUCTION: India's major source of income is from agriculture sector and70% of farmers depending on the agriculture. In Indian irrigation system, the famers are chosen most of the methods manually such as drip, terraced, ditch irrigation system. In order to improve to the crop productivity there is an urgent need to change manual method to automation. Also consider the water availability throughout India it is one of the valuable resources to protect and save for future needs. Embedded based automatic irrigation system is suitable for farmers available at low cost and easy installation. This system should help for the farmer that provides the water to crop at stringent time and quantity. Automation irrigation system observes the moisture sensorst temperature variations of around the crop area that's gives a precise time of operation of the motor turn ON and OFF. So automatically avoids the human errors and check soil moisture level.Internet of things (IOT) allows to controls the systems from remote area over an internet. So it can avoid the human errors which appear during the operation of system. IOT is the emerging area that penetrates other area and made them so efficient.

2 .SYSTEM DESIGN

The block diagram of the proposed system as shown in Fig. 1 consists of sensing unit such as Soil Moisture Sensor to measure water content of soil.

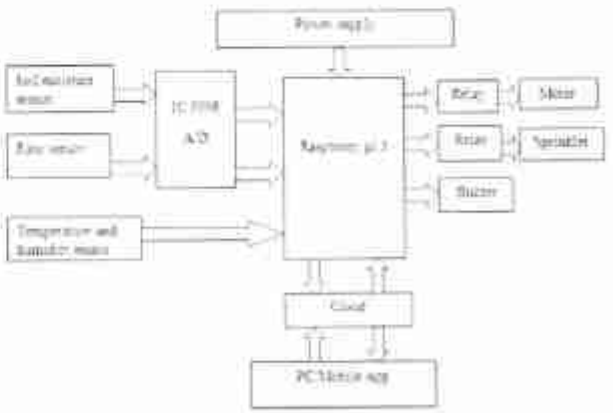

Fig 1: Block diagram

BrainTumorDetectionMethodUsingMETandFuzzy C-MeansClusteringAlgorithm

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***Abstract*: Image division is the most vital examination for picture investigation. which is utilized to acquire the fundamental data from the pictures. It assumes a fundamental data from the pictures. It assumes a fundamental job in medicinal picture examination . Picture division assumes a huge job in picture preparing as it helps in extraction of suspicious areas from the therapeutic pictures.The required MRI images are to be collected. The algorithm of minimum error threshold method is based on the Bayesian classification rule. This method first computes by using minimum error threshold and is subjected to Fuzzy C-means clustering algorithm. MRI scans of human brains shapes the information pictures for our framework where the gray scale MRI images as info. Commotions present in any picture, will be evacuated utilizing a middle separated technique. The preprocessed picture is given for picture division utilizing Fuzzy C-implies grouping calculations.as there are odds of event of mis-grouped districts after the use of Fuzzy C-implies bunching calculation, it is exposed to morphological separating which is performed after the picture is fragmented by Fuzzy c-implies bunching calculation. The brain tumor area is identified by applying our anticipated calculation. This method thus is so efficient compared and its efficiency is estimated with predictive accuracy and dice coefficient.**

***Keywords*- brain tumor, medical imaging, minimum error threshold, fuzzy c-means**

I. INTRODUCTION

Brain tumor is happened as a result of the anomalous and uncontrolled cell division action of the brain tissue. Brain tumors are arranged as favorable and dangerous .There are a wide range of approaches to analyze brain tumor, among which most prominent and powerful is MRI .In MRI procedure ,brain is imaged based on thickness of water in delicate tissues which is higher contrasted with different tissues,for example, bone.Magnetic Resonance images demonstrate the mind structure ,tumor size and its area. MRI has great difference goals for various tissues.

A standout amongst the most essential systems to remove helpful data for medical pictures is division.A considerable lot of the picture handling strategies depends on threshold based and cluster based. In this project we are using three types of techniques to detect the brain tumor namely, MET method, modified MET and Fuzzy c- means clustering. Among them, Modified Error Thresholding method has the algorithm which depends on Bayesian Classification rule. After applying threshold value then it is subjected to Fuzzy c- means clustering technique, which is utilized brain tumors from the separatedsubstructures[1].

Fuzzy c- means is the algorithm which is widely used, as it gives only the foreground image of the tumor rather than giving background image. This paper is depends on dissecting of Fuzzy c-means calculation and identifying thetumor.FCM algorithm overcomes the drawbacks in previous clustering algorithms. This calculation partitions the pictures space into littler districts or units called bunches and later such regions are to be disjoined[2]. The objectives of proposed work are to recognise the tumor location with more efficiency and also to detect the location of tumor effectively and to apply the above techniques inorder to get the best results. The paper is written as follows, in section 2, Methodology is described and then in section 3

Improved BSC and Systematic polar code channel estimation in wireless 5G

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Abstract—*In wireless communications polar codes plays major role in warless fading environment. For efficient wireless communication system design, channel estimation is the fundamental step in fading channels. Information bits and frozen bits are required for both SN-polar codes. Based on the above two data sets (i.e. info-frozen) efficient SN-polar code implementation is possible. But in conventional channel estimation methods additional pilots are inserted in the given data. Where as in SN-polar codes pilots are selected from the information bits. Therefore conventional polar encoding structure is not suitable for pilot selection every time. Previously E-UEPS structures are used for efficient coding structure, but it's very difficult to maintain the pilots in the same data set, because of this complexity also slightly increases. To avoid the above said drawbacks Bi Symmetric-channel based polar encoding structure is used. The basic advantage of Polar based Bisymmetric encoding structure automatically improves the FER.*

I. INTRODUCTION

Polar codes are basically used for capacity improvements [1]. Several researchers and academinicians are working on this continuously since long back. The current 5Generation and 3GPP tradeoff, polar codes are used in uplink and down link as a channel coding in eM-BB type of services. Polar codes also used in Ultra low latency and massive machine type communications. Compared to modern codes such as Low density-parity check (LDPC) and successive-cancellation-list (SCL), the error correcting performance with finite length systematic polar codes are far better.

Based on the channel reliability followed by a each bit to be encoded the construction of the polar codes are possible. The channel reliability can be observed by SNR and code length. Therefore a polar code are more suitable and is easy to implement low description complexity, while maintaining good error-correction performance over multiple code and channel parameters[2].

The main contributions of this paper are summarized as follows:

In Section II we discuss some basics about polar code how it is applicable for 5G encoding schemes. In III Section we discuss previous method in detail along with the short comes. In IV section we discuss our proposed method .Conclusions are drawn in Section V.

II. BASIC CONCEPTS OF POLAR CODES

In this section we discuss the basic definition of polar codes, frozen set and decoding with the basic system over view of polar code for both uplink and down link.

A. Definition of polar codes

We consider a polar code of length N, dimension K and construct it using the generator matrix $G_N = G_2^{\otimes n}$, where n = log(N), (.)⊗denotes the nth Kronecker power and

$$G_2 = \begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix}$$

We encode a message vector $\mathbf{m} = [m_0, m_1, \ldots, m_{(K-1)}]$ of length K by first forming a vector $\mathbf{u} = [u_0, u_1, \ldots, u_{(N-1)}]$ such that **m** appears in **u** on the index set $I = \{0, 1, 2, \ldots, N-1\}$ and then computing $\mathbf{v} = \mathbf{u}\Pi G^N$, where Π is a bit-reversal matrix as defined in. In polar coding literature, the set I is usually referred to as the set of 'free indices' and the complement F as the set of 'frozen indices'. We set to zero the bits in **u** corresponding to the index set F. The set I is known to both the encoder and the encoder [1, 3].

The construction of polar codes is equivalent to constructing I for a list of available construction methods. We map **v** to $\mathbf{x} \in \{1,-1\}^N$ and pass the interleaved symbols **x** through a partial response channel impulse response $\mathbf{h} = [h_0, h_1, \ldots, h_{\mu-1}]$ followed by an AWGN channel with noise variance

REAL TIME IMAGING AND SIGNAL ANALYSIS USING RADAR SENSOR

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Abstract— ***Imaging Radars are gaining attention as it has advantages like medical imaging, sensing humans in through-wall scenarios. But Radar images are unlike optic images and are of very low resolution since they are limited by the carrier frequency, size of the radar aperture, Doppler and clutter. This work proposes a close measuring device answer that could be a privacy secure and dark surroundings resistant system. In this resolution, we use a low power, Frequency Modulated Continuous Wave (FMCW) radar array to capture the reflected signals and then construct to 2D & 3D image frames. This resolution styles a knowledge pre-processing mechanism to get a grid of background static reflection, second an indication process mechanism to transfer received complicated measuring device signals to a matrix contains special information, and a Deep Learning scheme to filter broken frame which caused by the rough surface of human's body.***

Keywords— ***Through-wall imaging radar (TWI), Micro Doppler radars, Frequency modulated continuous wave (FMCW), Short-time Fourier Transform (STFT)***

I. INTRODUCTION

In thru-wall imaging (TWI) radar, the sign transmitted experiences huge constriction because of misfortune in free area, unfold within the air–divider interface (impedance mismatch), misfortune in divider, and scattering on various items. In TWI programs, excessive microwave radar goals with most flag entrance region unit interesting points. Electrically huge openings involving many cluster components are required to get high goals pictures. Such a radar framework with different receiving wire components each with a related information obtaining channel is both expensive and complex to execute. Diverse moving pieces of a human body offer ascent to unmistakable small scale Doppler's. This extra Doppler measurement empowers the unwinding of the goals as far as the transporter recurrence and the quantity of cluster components over different measurements [1].

Moreover, identifying the objective within the sight of solid clutter represents another extraordinary point. Clutter happens because of coupling among transmitter and receptor receiving wires, just as because of flag mirror image lying on the outside and internal partitions and near-by the things. The basic strategy is to diminish the messiness includes subtracting the reference mess reliant on information acquired within the sight of the objective. Increasingly modern strategies depend on methods dependent on flag preparing insights, for example, blind source detachment [1].

Continuous wave Doppler radars are characteristically proper for imaging moving people for different reasons. In the first place, stationary foundation clutter is smothered while utilizing continuous wave signals. Second, Doppler signals are definitely progressively powerful to multi-path brought about by walls and floors than wide-band wave forms. This paper proposes to join Doppler handling with two-dimensional cluster preparing to powerfully resolve the diverse dissipates on the human body in three measurements dependent on their distant Doppler's, azimuth and elevation positions. The diverse body parts are first settled dependent on their Doppler's. At that point the azimuth and elevation position of each body part with an distant Doppler is evaluated utilizing two-dimensional array processing.

II. BACKGROUND

Generally, restricted band radars are intended for TWI with low objectives. To improve the objectives, millimeter waves can be utilized to enter through clothing or else packaging. By the by, this methodology can't be utilized in applications, for example, infiltration thru walls of thick substances (wood, mortar, blocks, also solid squares), as a result of strong signal attenuation. Along these lines, ultra-wideband (UWB) microwave radar acts like a legit decision to understand the TWI disadvantage on the grounds that UWB system makes up for the decrease in the inside recurrence with the aid of boosting the information transmission that converts into fine vary goals [5].Moreover, UWB framework gives higher invulnerability in opposition to impedances in like manner as lower capture likelihood

HEART STROKE FORECASTING AND HEALTH PARAMETERS ANALYSIS USING PYTHON

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ABSTRACT:

In our day to day lives, we are packed with work tensions and financial issues forcing us to neglect our health conditions and also today's agriculture methods like usage of fertilizers and fungicides along with food habits like junk food and inappropriate timings makes our health vulnerable to serious issues and make our life more dependent on medication.

In this scenario, it is best method to put the technological advancements like wearable devices to monitor out health continuously and make forecasts about health conditions making us to take precautions more accurately. Our project mainly focuses on monitoring body parameters like-Temperature, Heartbeat, ECG-Parameters (HRV-Heart rate variability, R-R Intervals, etc.,) by using Raspberry Pi and making predictions for future time. Also, this data can be utilize to integrate with IoT for doctor monitoring from remote location or our family members from other countries as well.

Keywords: Temperature, Heartbeat, ECG parameters, IOT, Raspberry Pi.

1. INTRODUCTION:

Internet-connected devices are acquiring vast potential as it pushes our daily life forward towards automation, and the rapid drop in price for typical IoT components allows people to innovate new products. IoT is the combination of embedded systems, sensors, software and this can be also referred to as internet of everything [1][6]. As health is one of the most important issues nowadays, IoT could be utilized in the health industry as a continuous health monitoring system. At the same time, the internet is now easily available for mobile technologies, which makes remote observance in everything more popular. When a patient gets admitted to a hospital or in other location under observation of medical assistant, the relatives of the patients are anxious about his/her health situation throughout all the time. The combination of Raspberry Pi and IoT has solved this situation by a new innovative technology in healthcare system through which it is also possible to monitor the health condition of the patient remotely. Raspberry Pi is a platform which offers a complete Linux environment on a tiny platform at a very low cost, and it also permits interfacing services and actuators through the general purpose I/O pins. In this proposed system, patient's heart rate, blood pressure, respiration rate, body temperature, body movement and saline levels are measured. Instant conveyance of the health information of the patient to the relatives will make the hospital management more responsible and liable for their works. Hospital management typically uses huge machines to measure the health data of the patients. On the other hand, we can be able to measure the health data using e-Health Sensor Platform in Raspberry Pi. This might be employed in the hospitals yet as home. Moreover, it will additionally decrease the cost of health observance and the space of the room. We have tried to develop a health monitoring system to acquire the data and share the information with the health units and relatives by remotely monitoring through the internet. In order to do this, Raspberry Pi collects the health data of the patients from the sensors and stores in the cloud and it is displayed on the website. For the security and safety issues, a role-based user authentication system is also available in the system to access the information. Also, the Raspberry Pi automatically controls the appliances according to the health condition of the patient.

2. LITERATURE SURVEY

Ananda Mohan Ghosh et al. [1] has demonstrated a health care system for hospital management to allow relatives and doctors to remotely monitor the health condition of a patient via internet using Arduino Uno connected with E-health sensor shield kit and Phidgets interface kit. But unlike our solution, it does not provide email and SMS alert to an emergency contact list.

P Kumar et al. [2] has proposed a raspberry pi controlled patient monitoring system where heartbeat, respiration, temperature and body movement of the patient is being measured using sensors and displayed on the screen using the putty software. However, it does not contain the alarm notification for providing prescribed drugs to the patient which has been added in our proposed solution.

Detection of Targets up to maximum unambiguous range using FMCW RADAR

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Abstract:

In most applications of FM-CW radar, the targets are in close distance to the Radar. In such cases, the total travel time of the target's radar signature (round trip time) is very small when compared to the transmitted signal duration. This makes the process of finding out the range and velocity of the target very easy. But when the target is far away from the radar, then the round trip time of the radar signature will be large when compared to the duration of the transmitted signal. So much of the radar signature is received after the start of the next transmit waveform. In this paper, we study various signal-processing options to deal with the distant or long-range targets. We demonstrate how to retain both range and Doppler shift information for a number of targets anywhere in the space from very near the target up to the radar's unambiguous range.

Keywords: FMCW radar, Unambiguous range, Doppler Shift, Round trip time, Range resolution.

Introduction

The applications of FM-CW radar include automotive radar applications, ice sheet thickness measurement and atmospheric boundary layer profiling to security imaging. FMCW radars are used over plse radars. This is because, the transmit energy of the radar is over a lower peak power. Generally, the FMCW radars are applicable for short-range targets only. When the targets are at shorter distance, it becomes easy to calculate the range and Doppler shift as there is nearly complete temporal overlap of a target's return signal with the corresponding transmitted chirp as illustrated in Fig. 1(a). Here, the transmitted and received waveforms get mixed and a demodulated waveform with a frequency fd which is proportional to target's range is generated. That can be filtered out. But in case of distant targets, the received waveform offset cannot be ignored and a single target generates two demodulation tones, fd1 and fd2 as illustrated in Fig. 1(b). If we filter out the signal components with frequency fd1, the target's SNR degrades. So this becomes a problem with distant targets. This has become a drawback to FMCW radars when compared to pulsed radars. In pulsed radars, the range of the target can be found from 0 to R_{max}. This problem in FMCW radars can be solved by increasing the FMCW chirp duration or by eliminating the two frequency tones and

Mitigation of Near-Far Effect in Pseudolite Based On Beamforming

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Abstract*— *A new near-far effect mitigation method based on array signal to reconcile the near-far problem in pseudolites. It can adjust the power intensity of the pseudolite by withholding the beam direction to make it accord with the real navigational signal. Meanwhile, this method achieves maximum interference signal filtering, thus the navigation receiver can work accurately under the concurrence of pseudolites, solid interferences and navigation signals. The cogency of the proposed method is proved through simulations and performance analysis

Keywords: Pseudolite - Near-far effect - Array signal Beamforming processing.

I.INTRODUCTION

Pseudolites are initially proposed by Beser and Parkinson in 1982[1], this Pseudolite technology is essentially used to verify the efficiency of receivers on the ground before GPS satellite was launched. However, pseudolites can access the number of visible satellites, and improve the geometric factors greatly with suitable arrangements. It [1] can enhance the positioning accuracy of the navigation system significantly [2, 3]. Therefore, pseudolite technology has received substantial attention and widespread application in various fields since it was put ahead. Using pseudolites to position independently or in mix with navigation satellites has become one of the effective ways to powerful achievement of navigation system. However, the near-far effect is still one of the primary problems in pseudolites [4].

Several possible methods have been determined to overcome the near-far effect in recent years. TDMA, FDMA and CDMA were primarily the three possible approaches [5]. The TDMA techniques accept pulses with a certain duty cycle to transmit pseudolite signals. While the FDMA method allow transmitting frequency of pseudolites and GPS to have a certain frequency offset, but continue it in the same waveband. Unlike TDMA and FDMA, the CDMA technique uses a longer code sequence than the GPS code. The complete studies on these methods are implementing in [6-8], and the results show that the radio frequency module and correlators of the receiver need great changes with the latter two methods. When it comes to the TDMA, against of its easy implementation, it is limited due to its seam improve- ment in SNR and higher requirements for the AGC

Pseudolite signals which the GPS receiver. After subtracting the reconstructed pseudolite signal from the total received signals, the received signals are sent back to the correlator of each channel for dispreading. However, this method has performance of the receiver. An "interference cancellation" method mentioned in [9, 10] conducts peak detection of conducts peak detection of pseudolite signals which produces strong interference by adding relevant channels of much delay and relatively great changes are made in the correlator of the receiver. To achieve the purpose of suppressing interference, a new method named "multi-user detection" is proposed in [11], which obtains information of interference signals by increasing the number of receiving channels, and subtracts the interference signal from the received signal. However, this process is too complicated for engineering realization [12]. The anti-interference technology with adaptive nulling antenna mentioned in [4], conducts adaptive zero interference suppression processing while regarding the pseudolite signal as a wideband interference signal. Navigation signals can be better captured and tracked in this way, but pseudolite signal is completely inhibited.

In this paper, a new near-far effect mitigation method based on array signal processing is proposed to reconcile the near-far problem in pseudolites. It can adjust the power intensity of the pseudolite by constraining the beam direction to make it accord with the real navigation signal. At the same time, this method achieves maximum interference signal filtering, thus the navigation receiver works properly under the simultaneity of pseudolites, strong interferences and navigation satellite signals.

II. PROPOSED METHOD

A. Linear Constrained Minimum Variance (LCMV) Algorithm

Taking uniform linear array(ULA) consisting of M sensor elements as an example, let us assume that there is one desired signal d(t) and J narrowband interferences $i_j(t)$, $j = 1,\ldots,J$ in the far field, with the Directions-Of-Arrival (DOA) θ_0 and θ_j respectively. Additive white noise on each array element is $n_k(t)$, and noise variance is σ_n^2. Therefore, the received signal on the array element k can be modeled as

$$X_k(t) = a_k(\theta_0)d(t) + \sum a_k(\theta_j)i_j(t) + n_k(t) \qquad (1)$$

A SOFT ERROR TOLERANCE TECHNIQUE FOR COMBINATIONAL CIRCUIT USING D FLIPFLOP BASED ON SELECTIVE TRANSISTOR REDUNDANCY

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Abstract- ***Manufacturing defects are often with higher vulnerability of soft error are occurring in fabrication technology in the size of nm level. This paper is mainly concentrate on the scheming on combinational circuits for preventing soft error tolerance with minutest area overhead based on technique of selective transistor redundancy. This notation is on securing sensitive transistor because soft error detection range is fairly towering ,until area overhead constraint and circuit reliability is met and for analyzing test for faults which is in random order. Sensitive transistors are shielded by novel gate-level reliability evaluation technique is propounded that gives parallel results to evaluate at the transistor level with magnitude order reduction using spice in CPU time and also involves duplicating and sizing methodology. LGsynth'19 benchmark circuits is used to estimate the proposed algorithm. Simulation results of this paper attains effective reliability than other techniques of transistor sizing. For lower area overhead with CMOS technology of 130nm and using D-flipflop for 2input nand gates such as nand21, nand22, nand23, nand24, nand25, for fault tolerance reduction is implemented using triple modular redundancy method.***

Keywords – Fault tolerance, logic synthesis, radiation hardening,single event multiple upsets, single event transient (SET),single event upset (SEU), soft error tolerance.

1.INTRODUCTION

Due to advancements in CMOS technology and shrinking feature size to nanometer scale,studies have indicated that high-density chips will not only be increasingly accompanied by manufacturing defects but also susceptible to dynamic faults during chip operation. Nanoscale devices are limited by several characteristics; most dominant are the devices higher defect rates and the increased susceptibility to soft errors. Both of these types of errors affect the operation of a circuit if they are not addressed. Reliability of a circuit can be defined as its ability to function properly despite the existence of such errors.

2.LITERATURE SURVEY:

"Soft error considerations for deep-submicron CMOS circuit applications,"N. Cohen, T. S. Sriram, N. Leland, D. Moyer, S. Butler, and R. Flatley , in *Proc. Int. Electron Devices Meeting (IEDM)*, Dec. 1999. "The increasing importance of characterizing both memory arrays and core logic when estimating soft error FIT(failure in time) rates has been demonstrated using test circuits ,a 21264 alpha microprocessor and simulations. The reduction of operating voltage has been determined to increase the soft error rate exponentially at 2.1-2.2 decades/volts. Based on SLA roadmap for CMOS scaling trends, meeting FIR rate requirements in the core logic will pose many challenges in the imminent future."

"Basic mechanisms and modeling of single-event upset in digital microelectronics," P. E. Dodd and L. W. Massengill. "physical mechanisms responsible for nondestructive single event effects in digitial microelectronics are reviewed, concentrating on silicon MOS device and integrated circuits. A brief historical overview of single event effects in space and terrestrial systems is given ,and upset mechanisms in dynamic random access memories,static random access memories and combinational logic are detailed. Techniques for mitigating single-event upset are described,as well as methods for predicting device and circuit single event response using computer simulations. The impact of technology tends to single-event susceptibility and future areas of concern are explored."

"Radiation-induced soft errors in advanced semiconductor technologies" R. C. Baumann. "The once-ephemeral radiation induced soft error has became a key threat to advanced commercial electronic components and systems. Left unchallenged, soft errors have the potential for inducing the highest failure rate of all other reliability mechanisms combined. This article briefly reviews the types of failure modes for soft errors, the three dominant radiation mechanisms responsible for creating soft errors in terrestrial applications,and how these soft errors are generated by the collection of radiation induced charge. The soft error sensitivity has a function of technology scaling for various memory and logic components is then presented with

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Enhancement 2×2 Compact Extended MIMO-Antenna

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Abstract:

This study proposes a two constituent UWB MIMO antenna for UWB applications. This antenna is designed with three open L-shaped slot (LS) antenna elements and a narrow slot which is placed on the defected ground plane. To get good isolation the antenna elements are placed parallel to one another. To degrade the mutual coupling of antenna elements within the low freq. band (3-5.2GHz) a narrow slot is added. The antenna is designed on FR4 with dimensions18mm×34mm×1.6mm.The isolation is a smaller amount than -24 decibel within the complete band is achieved over the complete operating band (2.52 to 25 GHz). The performance parameters like isolation between the ports, return loss VSWR, realized gain, envelope correlation coefficient (ECC), Diversity gain (DG) and total active reflection constant (TARC) is observed.

Index Terms— *MIMO antenna, Ultra Wide Band antenna, High isolation, Tapered-fed.*

I.INTRODUCTION

Nowadays ULTRA WIDE BAND (UWB) technology is a fastly expanding and become a popular technology. By using this technology it is possible to transmit signals have low energy level in wide frequency band. The important applications of this technology is in wireless audio, data and video distribution, radar imaging and precision Geolocation, etc. But the main drawback of UWB technology is it experiences multipath fading as like in wireless communications. There is a popular technique that is multiple-input-multiple-output (MIMO) method which provide multiplexing gain to improve the capacity of the system and diversity gain to have better quality. [2]. So to avoid multipath fading integration of UWB and MIMO technology is used. The basic concept of MIMO diversity is with the help of multiple antennas the signals are transmitted or received with various fading characteristics. The reliability of the MIMO system depends upon selection/combination of the incoming signals. But placing of number of antennas within the less space, which is required for smaller devices will arise severe mutual coupling and decreases the diversity performance. Therefore, major challenge to use MIMO method in smaller devices is the installation of the small MIMO antennas with less mutual coupling.

In this paper, an UWB MIMO antenna design with a bandwidth from 2.52 to 25GHz is suggested. This antenna is designed with dimension of 18mm×34mm×1.6mm, about 25% minor than the one in[6]. To improve isolation and bandwidth, 2 large ground stubs and one small ground stub is used. Large stubs are treated as parasitic monopoles. Two planar-monopole antenna parameters with tapered-fed are positioned parallel to one another. h strip are old to enhance isolation and bandwidth. By observing the simulated results, it is observed that MIMO antenna is suitable for portable UWB devices.

II. ANTENNA DESIGN

2.1. Antenna Configuration

The projected UWB-MIMO antenna configuration is exposed in figure.2.1a. The antennas are fabricated on FR4 substrate of nonconductor loss tangent, tan δ = 0.02 and relative permittivity, Ɛr = 4.4. The thickness of substrate is 1.6 mm and dimensions are 18 mm× 34 mm. The improved rectangular patch antenna with 5.5mm×7.75mm is printed on double side of substrate as shown in figure.2.1a. This antenna is designed such that it is operated around 3 GHz and have half-wavelength radiating length.

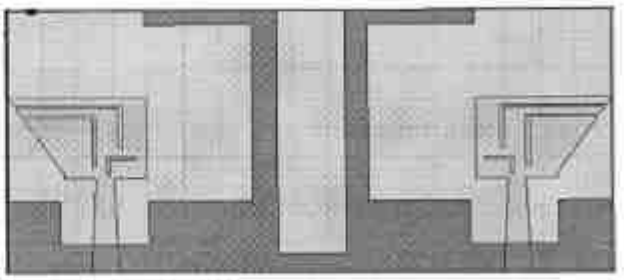


Figure.2.1a. Projected MIMO antenna

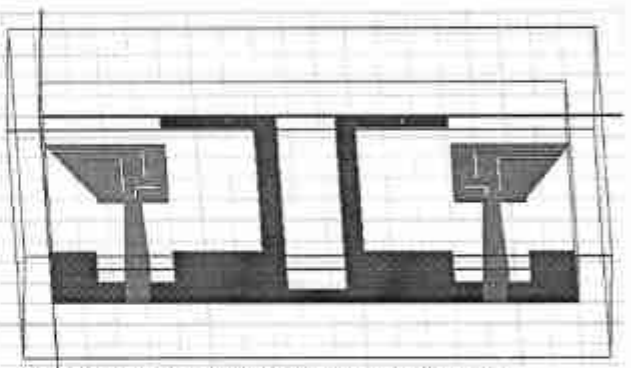


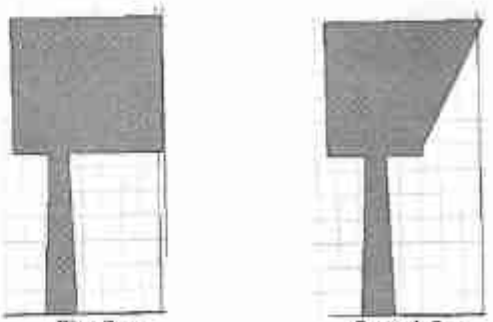
Figure.2.1b. Projected MIMO antenna with front read

By using following formula the low resonant freq. of monopole is calculated.

$$fr = \frac{14.4}{l1 + l2 + g - \frac{A1}{2g\sqrt{\varepsilon_r + 1}} + \frac{A2}{2g\sqrt{\varepsilon_r + 1}}}$$

The area of ground plane is considered as A1and area of radiation patch is considered as A2,and ground plane length is taken as l1and l2 considered as length of radiation patch, 'g' treated as gap between ground plane and radiation patch.

The suggested radiator is intended with a blend of rectangular (Lpt × Wpt) and triangular (height 4 mm and station 5.15 mm) stubs and developed as new polygon shape radiator. This developed radiator is fed with tapered micro strip of dimension (Lf × Wf) coupled at the down side of each one radiator. Combination of rectangular shaped and T-shaped stubs form as ground plane. By impression of rectangular-shaped slot it is developed as a new inverted L shape. This shape is used to improve the isolation among two antennas which is shown in figure.2.1c.



First Step Second Step

Estd. 1989

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3.3.2 Number of books and chapters in edited volumes / books published, and papers published in national/international conference-proceedings per teacher during last five years

Name of the teacher	Title of the Book/ Chapters Published	Title of the Paper	Title of the proceedings of the conference	Year of publication	ISBN/ ISSN number of the proceeding	Whether at the time of publication Affiliating InstitutionWas same Yes/NO	Name of the publisher
2018							
Dr. A Srinivasa Reddy	Computational Intelligence in Pattern Recognition	Shuffled Differential Evolution-Based Combined Heat and Power Economic Dispatch	Soft Computing in Data Analytics . Advances in Intelligent Systems and Computing	2018	978-981-13-0513-9	Yes	Springer
Samparthi V S Kumar	Journal of Physics: Conference Series	Dynamic Design And Implementation Of Security Intelligence	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

Dr. T. Venkateswara Rao	N/A	Design of f)haped 3-element array antenna for directive radiatin in Ku-band applications	2018 Conference on Signal Processing And Communication Engineering Systems	2018	) 978-1-5386-2370-1	Yes	IEEE
Dr. A.Yesu Babu	Journal of Physics: Conference Series	Computational Prediction And Validation Studies On A Diverse Dataset Of Cox-2 Inhibitors	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr M Krishna	Journal of Physics: Conference Series	A multi Ability CP-ABE access control scheme for public cloud storage	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr M Krishna	Journal of Physics: Conference Series	Performance study of cloud computing for scientific applications	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr M Krishna	Journal of Physics: Conference Series	Data productive collaborative filtering using deep learning based recommender model	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr M Krishna	Advances in Intelligent Systems and Computing	Independent and Distributed Access to Encrypted Cloud Databases	Computational Intelligence in Information Systems	2018	978-3-030-03301-9	Yes	Springer

Dr N Deepak	Journal of Physics: Conference Series	Computational Prediction And Validation Studies On A Diverse Dataset Of Cox-2 Inhibitors	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr N Deepak	Journal of Physics: Conference Series	Dynamic Security For Multi-User Access Control In Distributed Environment	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
S.Mohan Babu Chowdary	Journal of Physics: Conference Series	A Novel Approach To Compress DNA Repetative Sequences In Bioinformatics	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Konda Sreenu	Journal of Physics: Conference Series	Multi-core with ht Technology to solve data lake complex problems	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Konda Sreenu	Journal of Physics: Conference Series	Various Ciphers in Classical Cryptography	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
K N Madhavai Latha	Journal of Physics: Conference Series	Systematic approach for enrichment of docking outcome using consensus scoring functions	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

K. Chaitanya Deepthi	Journal of Physics: Conference Series	A multi Abuity CP-ABE access control scheme for public cloud storage	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
K. Chaitanya Deepthi	Journal of Physics: Conference Series	A novel artificial intelligence program testing service (ai-pts) model	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
K. VaradaRaj kumar	Journal of Physics: Conference Series	Dynamic Security For Multi-User Access Control In Distributed Environment	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
M.Ganesh Babu	Journal of Physics: Conference Series	Crypto-Stego Technique for Secure Data Transmission	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
M.Ganesh Babu	Journal of Physics: Conference Series	Super Resolution Image Reconstruction using Iterative Regularization method and Feed-Forward Neural networks	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
G.Satyanarayana	Journal of Physics: Conference Series	Failure node identification in mobile wireless sensor networks	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

Homer Benny Bandela	Journal of Physics: Conference Series	Various Ciphers in Classical Cryptography	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Homer Benny Bandela	Journal of Physics: Conference Series	Crypto-Stego Technique for Secure Data Transmission	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Homer Benny Bandela	Journal of Physics: Conference Series	Super Resolution Image Reconstruction using Iterative Regularization method and Feed-Forward Neural networks	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
S.K.Chaitanya.R	Journal of Physics: Conference Series	Dynamic Design And Implementation Of Security Intelligence	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
P Naga Deepthi	Journal of Physics: Conference Series	Acceptability analysis method for evaluate data on twitter using support vector machine	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
V V Deepthi Donavalli	Journal of Physics: Conference Series	Various Ciphers in Classical Cryptography	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

V V Deepthi Donavalli	Journal of Physics: Conference Series	Crypto-Stego Technique for Secure Data Transmission	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
V Pranav	Journal of Physics: Conference Series	Performance study of cloud computing for scientific applications	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
K. Swathi	Journal of Physics: Conference Series	Acceptability analysis method for evaluate data on twitter using support vector machine	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
S.Jaya Prakash	Journal of Physics: Conference Series	Dynamic Security For Multi-User Access Control In Distributed Environment	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr. Kolli Lalit Narayan	Computer Aided Design and Manufacturing	N/A	N/A	2018	ISBN-13 978-8120333420	Yes	PHI
Dr.S.Krishna Rao	Journal of Physics: Conference Series	An Ensemble Integrated Mailing System For Detecting Spam Mails	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

Dr.S.Krishna Rao	Journal of Physics: Conference Series	An Ensemble Path Finding In Wireless Sensor Networks	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr.K.Satyanarayna	Journal of Physics: Conference Series	Enhanced path recreation in remote sensor networks	International conference on computer vision and machine learning	2018	2321-5461	Yes	IOP Publishing
Dr Satyanarayana Kotha	Journal of Physics: Conference Series	Implementation of data mining techniques in web of things	International conference on computer vision and machine learning	2018	2321-5461	Yes	IOP Publishing
T.Satya Nagamani	Journal of Physics: Conference Series	A New Dynamic And Enhanced Resource Allocation Algorithm In Cloud Computing	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
T.Satya Nagamani	Journal of Physics: Conference Series	Survey: Image Forgery And Its Detection Techniques	International conference on computer vision and machine learning	2018	1228 012036	Yes	IOP Publishing
N.Prasad	Journal of Physics: Conference Series	An Ensemble Path Finding In Wireless Sensor Networks	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

N.Prasad	Journal of Physics: Conference Series	Implemenation of data mining techniques in web of things	International conference on computer vision and machine learning	2018	2321-5461	Yes	IOP Publishing
A.M.K.Kanna Babu	Journal of Physics: Conference Series	Enhanced path recreation in remote sensor networks	International conference on computer vision and machine learning	2018	2321-5461	Yes	IOP Publishing
G.Krishnaveni	Journal of Physics: Conference Series	A comparative performance analysis of different machine learning techniques	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
G.Krishnaveni	Journal of Physics: Conference Series	A framework for mining huge data by non-expert users with the assistance of knowledge base	International conference on computer vision and machine learning	2018	1228 012034	Yes	IOP Publishing
K.Purna Praksh	Journal of Physics: Conference Series	Data Productive Collaborative Filtering Using Deep Learning Based Recommender Model	International conference on computer vision and machine learning	2018	1228 012037	Yes	IOP Publishing
NVSK Vijaya Lakshmi K	Journal of Physics: Conference Series	A new dynamic and enhanced resource allocation algorithm in cloud computing	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

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NVSK Vijaya Lakshmi K	Journal of Physics: Conference Series	A framework for mining huge data by non-expert users with the assistance of knowledge base.	International conference on computer vision and machine learning	2018	1228 012034	Yes	IOP Publishing
K.Lakshmaji	Journal of Physics: Conference Series	An Ensemble Integrated Mailing System For Detecting Spam Mails	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
K.Lakshmaji	Journal of Physics: Conference Series	E-SRA: Ensemble selfish routing algorithm	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
J.Malathi	Journal of Physics: Conference Series	Survey: Image Forgery And Its Detection Techniques	International conference on computer vision and machine learning	2018	1228 012036	Yes	IOP Publishing
J.Malathi	Journal of Physics: Conference Series	A framework for mining huge data by non-expert users with the assistance of knowledge base.	International conference on computer vision and machine learning	2018	1228 012034	Yes	IOP Publishing

G.Vihari	Journal of Physics: Conference Series	Implementation of data mining techniques in web of things	International conference on computer vision and machine learning	2018	2321-5461	Yes	IOP Publishing
G.Vihari	Journal of Physics: Conference Series	E-SRA: Ensemble selfish routing algorithm	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
P Ramaiah Chowdary	Journal of Physics: Conference Series	Computer business organization on cloud platform	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
P Ramaiah Chowdary	Journal of Physics: Conference Series	Identification of MITM Attack by Utilizing Artificial Intelligence Mechanism in Cloud Environments	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
B.Lalitha Bhavani	Journal of Physics: Conference Series	A new dynamic and enhanced resource allocation algorithm in cloud computing	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
B.Lalitha Bhavani	Journal of Physics: Conference Series	A comparative performance analysis of different machine learning techniques.	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

G Pavan	Journal of Physics: Conference Series	Enhanced path recreation in remote sensor networks	International conference on computer vision and machine learning	2018	2321-5461	Yes	IOP Publishing
G Pavan	Journal of Physics: Conference Series	An Ensemble Integrated Mailing System For Detecting Spam Mails.	International conference on computer vision and machine learning	2018	1228 012042	Yes	IOP Publishing
E.B.K.Manash	Journal of Physics: Conference Series	Deep Learning: A Branch of Machine Learning	International conference on computer vision and machine learning	2018	1228 (2019) 012045	Yes	IOP Publishing
P Rajendra Kumar	Journal of Physics: Conference Series	Deep Learning: A Branch of Machine Learning	International conference on computer vision and machine learning	2018	1228 (2019) 012045	Yes	IOP Publishing
A.M.K.Kanna Babu	Journal of Physics: Conference Series	An Ensemble Path Finding In Wireless Sensor Networks	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
V Gopinath	Journal of Physics: Conference Series	Re-Design of Smart Homes With Digital Twins	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing

Yallamanda Challa	Journal of Physics: Conference Series	Computer business organization on cloud platform	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Yallamanda Challa	Journal of Physics: Conference Series	Identification of MITM Attack by Utilizing Artificial Intelligence Mechanism in Cloud Environments	International conference on computer vision and machine learning	2018	Vol.1228	Yes	IOP Publishing
Dr. T. Venkateswara Rao	N/A	Design of Gregorian Reflector For Imaging	2018 IEEE Indian Conference on Antennas and Propogation (InCAP)	2018	978-1-5386-7060-6	Yes	IEEE

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Soft Computing in Data Analytics pp 525–532

Shuffled Differential Evolution-Based Combined Heat and Power Economic Dispatch

S. Nagaraju, A. Srinivasa Reddy & K. Vaisakh

Conference paper | First Online: 22 August 2018

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 758)

Abstract

A novel metaheuristic algorithm SDE augments the features both shuffled frog-leaping algorithm and differential evolution algorithm by employing partitioning and shuffling. In order to verify the effectiveness of the shuffled-differential evolution (SDE) algorithm and also to identify the ideal solution of the CHPED problem, test systems having four units are considered. The outcomes attained from the projected technique are contrasted with

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Dynamic design and implementation of security intelligence for industry

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Abstract: As The development of Internet of Things (IOT) technology became one of the proponents in the industrial revolution 4.0. Digital transformation began to be applied to the entire manufacturing industry, services, transportation and education which have slowly shifted utilizing IOT technology. The industrial revolution 4.0 has an impact on digital transformation and becomes a necessity that can change business patterns such as the ease of data interaction services between industries to customers that are also supported by ease of access and speed of decision making. However, in its development, stakeholders tend to focus on infrastructure and information systems, while the security of information systems is still a comfort zone for industries in the transformation to industry 4.0. The issue of information system security will be a challenge for the industry with open access to information systems; otherwise focus will hamper the business process of the industry. In this research will be discussed about the modeling and implementation of information system security with a combination of web-based security methods with port knocking firewall model and short message service gateway as a security medium with the concept of ease of access with safe and comfortable. The result of this research has been testing penetration testing using network tools.

Index Terms*: *Industry 4.0, cyber security, port knocking, short message service gateway

1. Introduction

The current industrial revolution has grown to 4.0 which replaces industry 3.0. According to [1] and [2] that the basic principle in industry 4.0 is the incorporation of machines, workflows, and systems, by applying intelligent networks along chains and production processes to control each other independently. There are four aspects of the challenges of implementing the industry revolution 4.0 according to Wolter namely information technology security issues, reliability issues and stability of production machinery, lack of adequate skills, lack of motivation of stakeholders to change; and the loss of a lot of work as it turns into automation [3] and [4]. Support of the Internet of Things (IOT) became the most important in the industry revolution 4.0 with open access to information systems and automation changed the way business as its own competitiveness for each industry [5] and [6] According to [7] and [8] security issues will be a challenge for each industry, sometimes for mature industries with adequate resources often overlooking security issues. For medium and small industries some have difficulty and lack of understanding of the security of information systems, stakeholders tend to focus on infrastructure and information systems as digital transformation in the speed of decision making. According to [8] the risks of information system security have an impact, among others, operational risks of Denial-of Service (DDOS) attacks, data theft, website hijacking and reputation risk of lack of trust of business colleagues followed by exposure through media about security vulnerabilities system. In addition, investment risk becomes the most perceived big losses that are large investments but the system is not integrated and the security system used is not in accordance with business needs.

IOT will lead to new problems related to information systems security management, namely the opening of connection lines. This is often used by hackers / hackers to steal data through the network. One of the most important components in an information security management system design is the use of firewalls [9]. The main role and task

Design of flag-shaped 3-element array antenna for directive radiation in Ku-band applications

K. Venkata Reddy ; T. Venkateswara Rao ; T. Anilkumar All Authors

Abstract: In this article, Antenna with flag-shaped radiating elements in antipodal configuration is proposed. The design and the study focuses on geometrical parameters like lengt... **View more**

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Abstract:

In this article, Antenna with flag-shaped radiating elements in antipodal configuration is proposed. The design and the study focuses on geometrical parameters like length of the patch, width of the flared structure to enhance the operability of the antenna in Ku-band spectrum. The proposed antenna is designed and simulated in ANSYS HFSS ver15.0 and the characteristic features obtained after simulation indicates that the antenna operates from 11.1283 GHz to 19.18 GHz. The proposed antenna is configured into an array with 3-elements. The characterization of antenna array is done in terms of return loss, isolation and radiation performance. The array configuration has improved the directive radiation performance.

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Computational prediction and validation studies on a diverse dataset of cox-2 inhibitors

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Abstract: In linear regression analysis, when data was derived from various reference sources, the experimental quality of such data has to be assessed. Significant variables based on the statistical data of analysis were chosen. Based on the parameters like correlation coefficient (r), F-value, cross-validation r2 etc quality of the generated equation was judged. An additional condition for high predictive ability of regression model is based on external set cross-validation r^2, ($R^2_{cv,ext}$) and the regression of observed activities against predicted activities and vice versa for validation set. Multivariate regression analysis using python program resulted in few influential parameters displayed significant positive and negative contribution towards biological activity of COX-2 inhibitors. A new regression model was attempted by dividing the complete set (n=64) as a 58 molecule training set and a 6 molecule validation set based on selection criteria after rejecting outliers from the data set.

Index Terms: Linear regression, COX-2, regression model, correlation

1. Introduction

Arachidonic acid is converted to prostaglandins (PGs) and exists in two isoforms, COX-1 and COX-2 [1]. Cyclo-oxygenase-2 (COX-2), a rate-limiting enzyme for prostanoid synthesis, is induced during inflammation and participates in inflammation mediated cytotoxicity. Cerebral ischemia is followed by an inflammatory reaction that plays a role in the evolution of the tissue damage [2]. Celecoxib, an anti arthritic agent that inhibits COX-2 but spares COX-1 at therapeutic doses, is expected to have minimal effects on platelet function compare the effects on platelet function of a supratherapeutic dose of celecoxib with a standard dose of naproxen a conventional NSAID [3 and 4]. The discovery of at least 2 cyclo-oxygenase (COX) isoenzymes, referred to as COX-1 and COX-2, has updated our knowledge of non steroidal anti-inflammatory drugs (NSAIDs) [5]. The 2 COX isoenzymes share structural and enzymatic similarities, but are specifically regulated at the molecular level and may be distinguished apart in their functions, although some physiological overlap between them does occur. The major goal in developing selective COX inhibitors is to improve NSAID tolerability [6].

Celecoxib, in the 1,5-diarylpyrazole class of compound [7], was the first launched selective COX-2 inhibitor and has excellent selectivity and potent anti-inflammatory activity; however, its aqueous solubility is relatively low, which decreases its oral bioavailability [8]. One approach to address this problem is to convert the compound into a pro drug that is readily soluble in water. Recent studies have

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A multi Ability CP-ABE access control scheme for public cloud storage

Kothapalli Chaitanya Deepthi[1*], Dasari Ashok[2] and Dr M Krishna[3]

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Abstract: The main personality of the cryptography structure based on communication with writings of stable figures and private keys [1-4]. Our development is a key encapsulation mechanism (KEM), so long messages can be coded under a short symmetric key. In our response, the writings of the figures and the private keys have stable dimensions and the people in general are directly in the maximum estimate of s. Furthermore, in our plan, the private key generator (PKG) can potentially include new people without modifying the already widespread data (as in the EIB's plans). We also note that there is no chain of importance between the characters, despite HIBE. The income of the general population is directed at the maximum size of S, and not in the amount of decoding keys that can be transmitted, which is the amount of conceivable characters. In this case, use a simple situation to find out about the group classification and main administration test problems. Think about a source that sends information to a provision of beneficiaries in a multicast session. Session security is supervised by two principles of useful substances: a Group Controller (GC) responsible for confirmation, approval and control and a Key Server (KS). To ensure classification in the middle of the multicast session, the sender (source) shares a mysterious symmetric key with all the individuals in the legitimate collection, called the Traffic Encryption Key (TEK). To multicast a mysterious message, the source encodes the message with the TEK using a symmetric encryption calculation. From previous documents, we look at how to share protected information in the cloud without losing keys. In this article, we present a new digital brand, an SSH key, hash functionality, and major escrow calculations.

Index Terms: Data usage, anonymous network, distributor, fake question, information spillage, finger print, fake actor

1. Introduction

Distributed computing has become a major innovation, both in the modern field and in the academic world, and in the overwhelming majority of specialists expects the distributed computing to be changed: The forms of data innovation (IT) and IT shopping center. In Cloud computing [5, 7, 12, 17, 30], customers interact with the "Cloud", which seems to be a solitary element instead of multiple servers. In this model, customers can store information remotely to appreciate applications and administrations in a high-level request for a common set of configurable computing resources. Although this cloud management compensation model offers significant reserves to customers and offers adaptability and versatility in terms of limits and execution, it includes the specialized cloud organization (CSP) of a

Performance study of cloud computing for scientific applications

V Pranav[1], P Satish Kumar[2] and Dr M Krishna[3]

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ABSTRACT. I propose the primary visualization of the cost estimate to evaluate the costs of the cloud database in simple and codified cases from the point of view of an occupant in a intermediate term period. Consider the variability of cloud costs and the chances that the database workload will vary in the evaluation time frame. The proposed model is instantiated in relation to some offers of cloud service providers and related authentic costs. Obviously, adaptable encryption affects the costs recognized with the capacity size and system usage of a database advantage.

1. Introduction

Distributed computing was chosen as a consideration of researchers as a strong advantage for running HPC applications at a potentially low cost. However, as a replacement framework, it is vague whether the mists are ready to run logical applications with a practical tool for every dollar. This work gives a complete assessment of the EC2 cloud around the corner. Initially I divide the possibilities of the cloud by measuring the general implementation of the different AWS administrations [1-3], such as register, memory, system and E / S. In view of the results in rudimentary realizations, and subsequently, I measure the implementation of logical applications in the cloud lastly, unlike the implementation of AWS and a private cloud, with a final goal defined, discover the main driver of its limitations when running logical applications.This project involves studying the ability of the cloud to function properly and, in addition, measuring the cost of the cloud to the extent that both the basic and logical applications are implemented. In addition, I evaluate several administrations, including S3, EBS and Dynamo DB, among the many advantages of AWS, taking into account the final goal of assessing the capabilities of what will be used by applications and logical systems. This also evaluates a true logical logging application through Swift's parallel script framework to resize. Equipped with point-by-point reference points to evaluate the expected tool and a definitive examination of the costs related to money, I hope this document is a recipe book for researchers that allow them to choose where to send and execute their logical applications between the open fogs, private mists, or half-mist of race.

2. Literature review

The study of writing is the most authoritative step in the management of programming progress. It has to consider the time element, the economy and the quality of the organization previous to building the device. Once these things are happy, then successive phases determine which structure and dialect can be used to build the device. Once software engineers start collecting the device, developers need

Data productive collaborative filtering using deep learning based recommender model

K Purna Prakash[1], Dr M Krishna[2] and M Satya Vijaya[3]

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Abstract: The term Synergistic Filtering is utilized as a spine in all Commercial Recommendation Systems today. Conventional synergistic separating (CF) strategy does not take in thought successions of client's appraising, which reflects changes of client's inclination over some stretch of time. The suggestion undertaking is affected by the profound learning pattern which demonstrates its critical effectiveness. The profound learning based recommender models give a superior detainment of client inclinations, thing highlights and clients things connections history. The proposed structure incorporates three segments: a network factorization demonstrates for the watched rating remaking, a bi-grouping model for the client thing subgroup examination. We recognize uninteresting things that have not been assessed yet rather are presumably going to get low evaluations from customers, and particularly attribute them as low regards. One imperative undertaking in our rating induction structure is the assurance of nostalgic introductions (SO) and qualities of sentiment words. It is on the grounds that deducing a rating from a survey is fundamentally done by removing conclusion words in the audit, and afterward amassing the SO of such words to decide the predominant or normal assumption suggested by the client. The proposed structure and recommend that the system does not depend on a substantial preparing corpus to work. Advance improvement of our rating derivation structure is progressing. Trial results demonstrate that the proposed system indicate changes over the conventional community oriented sifting strategy.

Index Terms: Idea float, Trust, Cold-begin, Hybrid model, float, consecutive example mining, recommender system, profound learning, neural network, YouTube suggestion, Matrix factorization, client thing subgroup.

1. Introduction

A significant part of the information on the Internet today comprises of archives made accessible to numerous beneficiaries through mailing records, dissemination records, notice sheets, non-concurrent PC gatherings, newsgroups, and the World Wide Web [1-6]. Our fundamental commitment is that a novel recommender system for film area in view of continuous consecutive example mining with time interim. The proposed recommender system creates examples of classes of things as disconnected continuous successive process which will be utilized in online procedure to change the review things delivered by convention collaborative filtering. In the ongoing decades, the profound learning has seen

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CIIS 2018: **Computational Intelligence in Information Systems** pp 107–116

Independent and Distributed Access to Encrypted Cloud Databases

Marlapalli Krishna, K. Chaitanya Deepthi, Soni Lanka, S. B. P. Rani Bandlamudi & Rama Rao Karri

Conference paper | First Online: 18 October 2018

379 Accesses | **3** Citations

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 888)

Abstract

The present generation prefers to store their data in the cloud, which brings them mobility and ease of extracting data from any device to anywhere in the world. Since data in the cloud is going to be placed online, it is important that these data in the clouds are well secured. The most important security challenge with data in the clouds is that the client was not aware of where the data is stored. Which

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Computational prediction and validation studies on a diverse dataset of cox-2 inhibitors

[1]Dr Adimulam Yesu Babu, [2*]Dr Deepak Nedunuri and [3]Ch Madhava Rao

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Abstract: In linear regression analysis, when data was derived from various reference sources, the experimental quality of such data has to be assessed. Significant variables based on the statistical data of analysis were chosen. Based on the parameters like correlation coefficient (r), F-value, cross-validation r2 etc quality of the generated equation was judged. An additional condition for high predictive ability of regression model is based on external set cross-validation r^2, ($R^2_{cv,ext}$) and the regression of observed activities against predicted activities and vice versa for validation set. Multivariate regression analysis using python program resulted in few influential parameters displayed significant positive and negative contribution towards biological activity of COX-2 inhibitors. A new regression model was attempted by dividing the complete set (n=64) as a 58 molecule training set and a 6 molecule validation set based on selection criteria after rejecting outliers from the data set.

Index Terms: Linear regression, COX-2, regression model, correlation

1. Introduction

Arachidonic acid is converted to prostaglandins (PGs) and exists in two isoforms, COX-1 and COX-2 [1]. Cyclo-oxygenase-2 (COX-2), a rate-limiting enzyme for prostanoid synthesis, is induced during inflammation and participates in inflammation mediated cytotoxicity. Cerebral ischemia is followed by an inflammatory reaction that plays a role in the evolution of the tissue damage [2]. Celecoxib, an anti arthritic agent that inhibits COX-2 but spares COX-1 at therapeutic doses, is expected to have minimal effects on platelet function compare the effects on platelet function of a supratherapeutic dose of celecoxib with a standard dose of naproxen a conventional NSAID [3 and 4]. The discovery of at least 2 cyclo-oxygenase (COX) isoenzymes, referred to as COX-1 and COX-2, has updated our knowledge of non steroidal anti-inflammatory drugs (NSAIDs) [5]. The 2 COX isoenzymes share structural and enzymatic similarities, but are specifically regulated at the molecular level and may be distinguished apart in their functions, although some physiological overlap between them does occur. The major goal in developing selective COX inhibitors is to improve NSAID tolerability [6].

Celecoxib, in the 1,5-diarylpyrazole class of compound [7], was the first launched selective COX-2 inhibitor and has excellent selectivity and potent anti-inflammatory activity; however, its aqueous solubility is relatively low, which decreases its oral bioavailability [8]. One approach to address this problem is to convert the compound into a pro drug that is readily soluble in water. Recent studies have

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Dynamic security for multi-user access control in distributed environment

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Abstract: Cloud computing is an on-demand facilities that allows customers to access processing sources and services from anywhere and at any time. Information protection means defending the information from illegal individuals or online hackers. We propose Integrated Group Sharing Approach (IGSA) schema for multiple customer accessibility control in customer operations like information insertion, deletion and in customer cancellation immediately reasoning database integration. We look at the security of IGSA plan and assess with the current IGSA techniques which are used for information access immediately reasoning computing for achieving real-time applications in reasoning. Our experimental results show efficient information removal from multiple customer accessibility in search of information from reasoning server. In future, some protection systems are to be developed to provide protection to cloud.

Index Terms: Cloud Computing, IGSA, Secure Multi key Word Search.

1. Introduction

Distributed computing is an on-request framework that empowers clients to get to processing assets and administrations from anyplace and whenever. There are three sorts of administrations in cloud. They are

1.SaaS (Software-as-a-benefit) : The Cloud supplier offers programming on-request.
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Figure 1: Advanced key distribution in cloud server environment.

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A novel approach to compress dna repetative sequences in bio-informatics

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***Abstract*:** In recent days numbers of gigabyte sequences of nucleotides are stored in a common database Genbank. All the victimization Deoxyribonucleic acid sequences for biological functions are to store the large number of Genomes in a compressed type in economically. Despite the fact that Deoxyribonucleic corrosive arrangements are put away in a packed kind, the information on Deoxyribonucleic corrosive groupings square measure hang on in science databases. For a four-letter alphabet in DNA (Adenine(A), Cytosine(C), Guanine(G) and Thymine(T)), an average description length of 2 bits per base is that the max length required to encode DNA. To reexamine the previous art of compression techniques and its merits and de merits, a novel attempt is initiated. Based on the comparative study of existing algorithms a new method proposed for DNA compression without depending on statistics of sequence set.

Key Words: DNA, GenBank, Phylogenetic Tree, Genomes

1. Introduction

There is large number of databases available for human genomic data. Resulting to the challenging environment on the changes of genomic data (DNA or Protein). The four classifications of DNA were adenine (A), cytosine (C), Guanine (G) and Thymine (T). Without compression two bits required to encode each base by information theory [2]. Even in existing general compression tool like gzip are used [3]. Thus, it became an essential need to compress DNA sequences by developing specific compression algorithms.

1.1 DNA

The genetic information can be passes from one bread to another which is incorporated by DNA is used in the enhancement and functioning of living organisms. Nucleotides and Phosphate, both the teams joined by organic compound were the two long polymers of DNA (Fig.1). In each cell, the organization of DNA is formed into long structures called chromosomes, for ex the human genome contains 23 chromosome pairs. In DNA replication chromosomes are duplicated before cell division.

Multi-core with ht technology to solve data lake complex problems

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Abstract. Technology is taking its lead towards growth and it should be timely used properly for complex problems. Everything is available with us and it should be planned properly for better technology and its usage. This paper deals with core technology that will save time and cost for high resolution images. Which are used for movies, virtual games and simulations? Multi-cores are not new to the society; they are taken their shape into different transitions. Now we are in dual core technology with more processors and speed. We can utilize the cores properly if we have software technology. Main objective of this paper is to utilize cores proper for specific work with interrelating them. Finally they have to be organized properly with governance of the software. For performance HT Technology is used to select core for specific job. By selecting different cores we can gain performance, same way increase the speed and high resolution of images.

1. Introduction

Technology is growing rapidly with lot of changes in them. Now we are in advanced technology with sophisticated resources. Computer system have coordination with the others devices and maintain them. One of critical area in computer system is the CPU or processor. There are lot improvements in the processor technology. We know single core processor, multiprocessor and now are in stage of multi-processor/multi-core as shown figure 1.

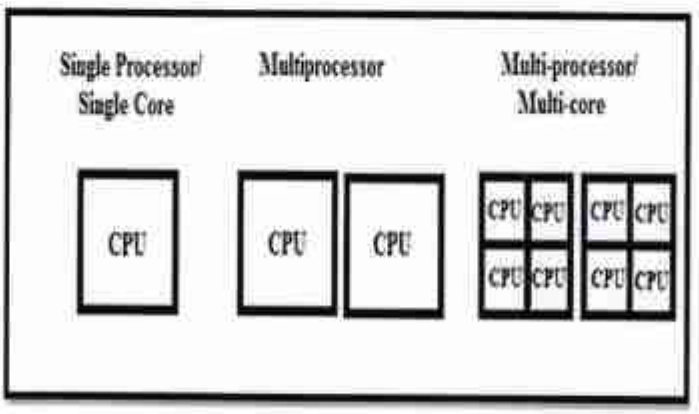

Figure. 1. Three system configurations.

Image processing is the study of analysis and manipulation of digital image. Image is a representation of the thing or a person or an art related to existing or non-existing thing. When image is computerized

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Various Ciphers in Classical Cryptography

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Abstract. Data Encryption is often widely used tool to provide security features. It translates the clear text into code such that it can only be accessed with the person who has the appropriate key. The recovery of clear text from such an unscrambled data is deciphering. Enciphering can be implemented by using some substitution technique, shifting technique or even mathematical logics. Application of such types of techniques is difficult to retrieve clear text. In the bygone times, several symmetric key base algorithms have been developed. This paper enlightens and analyzes the substitution ciphers and transposition ciphers. With the comparison of different parameters used in the algorithms give significance of the algorithm.

Keywords— Enciphering, Deciphering, Cipher text and Clear text.

1. Introduction

Cryptography is the dissertation of securely sending raw information to concerned recipient only. The necessity to secure the data has been increased due to the emerging technologies across the networks Data comprehended to all without any restrictions is nothing but clear text. Cryptanalysis has coevolved together with cryptography and the contest can be traced through the evolution of cryptography. The new ciphers get into limelight from the cons of previous ones and simultaneously new techniques will exist to decipher them. Classical code-breaking integrates analytical reasoning and mathematics. Cryptology underpins cryptography and cryptanalysis. At the Source enciphering has been performed with aid of shared secret key. The recipient performs the deciphering. The algorithms regarding cryptography are analyzed as secret-key cryptography and public key cryptography. This section expound about cryptographic techniques to encipher and decipher the clear text and cipher text respectively.

2. Types of encryption techniques

In cryptography, substitution cipher is a way of enciphering where the clear text is substituted with encrypted text, depending on a constant system. The recipient deciphers the text by performing the inverse substitution whereas in the transposition cipher, clear text is rearranged in a different and complex order, but the alphabets remain unaltered.

2.1. Number of keys includes

There are two types of keys in cryptography referred as public and private keys. The public key is shared between both the sender and receiver. As it is not secret. Private Key is used in situations to decipher where public key is used for enciphering.

Block Cipher and Stream Cipher are the approaches to process clear text. In Stream Ciphers, both enciphering and deciphering happens single bit at a time. In this case, the stream ciphers split the raw information into bits and randomized after that enciphering occurs. In Block Ciphers, block of clear text is enciphered at a time and vice versa. This happens as the unprocessed information is splattered into

Systematic approach for enrichment of docking outcome using consensus scoring functions

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Abstract. Traditional drug discovery is an expensive and time consuming process. Pharmaceutical industry suffers from a huge attrition due to last stage failure in traditional drug discovery. Bioinformatics principles can be utilized to overcome this pressure and speedup the process of drug discovery. Computer aided drug design is a remedy to avoid this loss. Drug design means designing the ligand that has high affinity towards target protein. This can be achieved by Virtual Screening. Ligand based virtual screening utilizes information from the ligand about the target. It is a ligand centric approach. The availability of three dimensional structures of protein targets and their possible ligands are utilized for identification and optimization of lead molecules (positive hits) in Structure based virtual screening. It is a target centric approach. To find out fit poses of ligand and its affinity at the active site of target Molecular Docking is done. Molecular docking is tool that contains search algorithm and scoring function. Search algorithms predict the binding modes of a target and fit ligand conformations towards the target. Scoring function is involved in prediction of the affinity of a ligand to bind to a protein target. There are various plat forms and scoring functions for predicting ligand – protein interactions. Consensus Scoring is a technique of combing information from multiple scoring functions and gives relatively accurate result when compared to single scoring function. It shows improvement in terms of quality of hit scores, false positive rate and enrichment. Consensus Scoring gives better, accurate and consistent results across the receptor systems when compared to individual or single scoring functions.

Keywords. Computer Aided Drug Design, Virtual Screening, Molecular Docking, Consensus Scoring.

1. Introduction

Discovery of a drug through traditional route is a step wise process and take a lot time for the process to yield in result. Developing a drug that acts against a specific protein target is a tough task. It takes years long to release a new drug molecule into market for treatment of a particular disease. Identification of high incidence of side effects in the last stage of drug discovery and development results in loss of effort, time and expenses. Thus drug industry suffers from late stage attrition in drug discovery. Computer aided drug design would show a remedy to avoid this huge loss. Bioinformatics principles are used in drug discovery to speed up the process of drug discovery [1].In every disease there will be potential drug targets

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A multi Ability CP-ABE access control scheme for public cloud storage

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Abstract: The main personality of the cryptography structure based on communication with writings of stable figures and private keys [1-4]. Our development is a key encapsulation mechanism (KEM), so long messages can be coded under a short symmetric key. In our response, the writings of the figures and the private keys have stable dimensions and the people in general are directly in the maximum estimate of s. Furthermore, in our plan, the private key generator (PKG) can potentially include new people without modifying the already widespread data (as in the EIB's plans). We also note that there is no chain of importance between the characters, despite HIBE. The income of the general population is directed at the maximum size of S, and not in the amount of decoding keys that can be transmitted, which is the amount of conceivable characters. In this case, use a simple situation to find out about the group classification and main administration test problems. Think about a source that sends information to a provision of beneficiaries in a multicast session. Session security is supervised by two principles of useful substances: a Group Controller (GC) responsible for confirmation, approval and control and a Key Server (KS). To ensure classification in the middle of the multicast session, the sender (source) shares a mysterious symmetric key with all the individuals in the legitimate collection, called the Traffic Encryption Key (TEK). To multicast a mysterious message, the source encodes the message with the TEK using a symmetric encryption calculation. From previous documents, we look at how to share protected information in the cloud without losing keys. In this article, we present a new digital brand, an SSH key, hash functionality, and major escrow calculations.

Index Terms: Data usage, anonymous network, distributor, fake question, information spillage, finger print, fake actor

1. Introduction

Distributed computing has become a major innovation, both in the modern field and in the academic world, and in the overwhelming majority of specialists expects the distributed computing to be changed: The forms of data innovation (IT) and IT shopping center. In Cloud computing [5, 7, 12, 17, 30], customers interact with the "Cloud", which seems to be a solitary element instead of multiple servers. In this model, customers can store information remotely to appreciate applications and administrations in a high-level request for a common set of configurable computing resources. Although this cloud management compensation model offers significant reserves to customers and offers adaptability and versatility in terms of limits and execution, it includes the specialized cloud organization (CSP) of a

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A novel artificial intelligence program testing service (ai-pts) model

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Abstract: Today's world is most dependent upon computer systems. Artificial Intelligence is also growing rapidly. We can see that vast growing field in computer system is Artificial Intelligence. We can use artificial intelligence applications for program testing service. Old process contains errors and they are corrected by end user himself. Artificial Intelligence applications can be used directly and wait to provide inputs. In between if any errors are modified by the software. This research paper focuses on AI-PTS model. Artificial Intelligence applications itself corrects the errors and take the program to run-time. We use decision trees, searching patterns, database training grammar.

Index Terms*: *Artificial Intelligence, testing, decision-trees, database, searching

1. Introduction

Every day there is a lot of improvements towards computer systems. Humans improved the power of computer systems, increasing speed, increasing memory and reducing the size with parallel to the time. Artificial Intelligence is the study of sciences and technology related to engineering which support in preparing smart systems. Artificial Intelligence is a roadmap for generating smart systems. Artificial Intelligence is equipped most with a computer robotics, which contains lot of programs. It is similar to human thinking. Artificial Intelligence is the study of how humans think; decide on decisions and work to solve problems. Invention of new things is not new to this world but getting feedback of those systems will be inception for more new things. Artificial Intelligence is a science with the combination of techno-engineering. AI is the combination of Biology, Computer Sciences and Engineering, Engineering, Psychology and Linguistics. Artificial Intelligence is the inception for growing technology of various computers related modules related with mind intelligences.

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Dynamic security for multi-user access control in distributed environment

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Abstract: Cloud computing is an on-demand facilities that allows customers to access processing sources and services from anywhere and at any time. Information protection means defending the information from illegal individuals or online hackers. We propose Integrated Group Sharing Approach (IGSA) schema for multiple customer accessibility control in customer operations like information insertion, deletion and in customer cancellation immediately reasoning database integration. We look at the security of IGSA plan and assess with the current IGSA techniques which are used for information access immediately reasoning computing for achieving real-time applications in reasoning. Our experimental results show efficient information removal from multiple customer accessibility in search of information from reasoning server. In future, some protection systems are to be developed to provide protection to cloud.

Index Terms: Cloud Computing, IGSA, Secure Multi key Word Search.

1. Introduction

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1.SaaS (Software-as-a-benefit) : The Cloud supplier offers programming on-request.
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3. IaaS (Infrastructure - as-a-benefit): The Cloud suppliers offer equipment assets or on the other hand foundation to client. At the point then the client get to the information from cloud specialist organization, there is a probability of assaulting the information.

Figure 1: Advanced key distribution in cloud server environment.

Crypto-Stego Technique for Secure Data Transmission

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Abstract: As days are passing, technology is taking its force towards its smartness. But there are some devices which are to be modified for better security results. Cryptography is a technique used for sending secret messages and Steganography is a process related to image. In this paper, we consider Cryptography and Steganography for secure transmission of secret message. The technique used in this paper is to place an image within another image. Encrypted data or Secret data is placed on an image based on pixels and that image is placed as background for other image. When the receiver receives that image he/she thinks it as a normal image but it contains a hidden message and decrypted for original image.

Index Terms: Cryptography, Message, Security, Steganography

1. Introduction

1.1 Computer Networks

Fast growing field in Computer Science and Engineering is Networks. If we are accessing more information from different websites it is because of Computer Networks. Computer Networks are playing a key role in our daily life like Email, Chatting, Whatsapp, Instagram etc. Computer Network technology is now spread to mobiles also. Now a million dollar question is whether we are safe or unsafe in using this type of technology. Figure 1 gives a view of safe or unsafe ambiguity network. Suppose we want to shop online by using computer or mobile, then compulsory last point is payment. When we provide credit card or debit card information it may get notified by the hacker. He/she may misuse the card details for his/her personal work or any other work.

Figure 1: Safe or Unsafe Network

Super Resolution Image Reconstruction Using Iterative Regularization Method and Feed –Forward Neural Networks

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Abstract. Super resolution is one of the best existing procedures to acquire high resolution image due to its effortlessness and extensive variety of use in numerous fields of science and engineering. There are various methods exist for super resolution but, this work made an effort by combining the iterative regularization method with neural network and obtained a good result comparatively from the previous method because of its high compatible nature with less and user friendly approach. It takes care of the noise in the initial stage and gets a concrete result when neural network is introduced. In addition to the noise it controls the vulnerable parameters and gets a highly super resolution image as compare to the literature.

Index Terms:: PSNR: Peak Signal to Noise Ratio, regularization, Neural networks.

1.Introduction

Regularization is often used to solve the problem of image restoration as an anti-existence of morbid or ill-posedness (ill-posed). The main purpose of regularization methods in super-resolution techniques is to get better recovery results by taking the image as a primary input. Regularization method to solve two important issues first is the regularization functional items to determine if Chiang Kai-shek, select regular item should be able to measure the signal of some kind of singularity, while at the same time be able to rebuild a better signal to maintain signal details. Followed by regularization coefficient of determination, choice of regularization factor should be able to ensure that the data fit according to the image information items and regular items of reasonable energy balance.

Regularization methods the main purpose is to introduce reasonable constraints to get better image restoration results. There are many improvements in regularization methods, like adaptive regularization parameter method, iterative regularization method, spatially adaptive wavelet method and regularization methods are seen in the literature but still the regularization image restoration process has its own significance in order to image smoothing and recovery.In1960s Harris and Goodman proposed the single-image recovery concepts and methods [1], many of them subsequently conducted a study, and have proposed a variety of recovery methods. After this, taking into account the degraded image is a process of estimating the ill-posed problem, Schultz and Stevenson [2] made

Failure node identification in mobile wireless sensor networks

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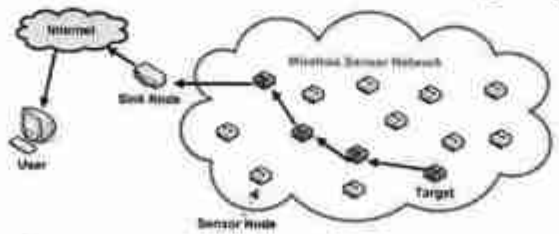
Abstract: Wireless Sensor Networks are subjected to node failures mainly due to restricted energy resource of sensors and harsh environments, and thus lead to failure of the sensor network. Failure of a node in WSN can split the network into components thereby partitioning it into disjoint sets which contributes to communication loss between the sender and the receiver. To overcome this loss of communication, there are two possible solutions: one solution is to restore the communication by either relaying an extra node at the damaged area, and another to exploit the existing node to bring back the connectivity. The distributed and localized algorithm is effective than the centralized approaches where the entire network topology must be known prior to the restoration of the network. This paper brings out the different approaches to handle the failed node in WSN.

Keywords – faulty node, network partition, wireless sensor networks, failed node

1. Introduction

Sensors are being the vigilant part in many modern surveillance applications like the border surveillance, environment monitoring, military applications, target tracking, health and medical monitoring etc. Wireless Sensor Networks consists of several such sensors which are randomly deployed in large numbers in sensitive, unattended and hostile territories. Each sensor node has a processor, radio, sensor and built-in electrical storage device. These nodes are collected then the data relay sink the node. where the data is groped and analysed. As sensor node have limited transmission range, the nodes transmits data over multi-hop. These nodes are useful thing /valuable supply held back resource constrained in terms of processing power and electrical storage device to hold or do some thing . A typical WSN is shown in fig:



Due to the limited resources faults occur frequently and unexpectedly in wireless sensor networks. The two types of faults aresimple crash failure where it becomes completely unactive and faults where the node behaves randomly . As failures occur to happen in the sensornetworks, it is very important to figure out what nodes of the network are not working correctly.

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Various Ciphers in Classical Cryptography

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Abstract. Data Encryption is often widely used tool to provide security features. It translates the clear text into code such that it can only be accessed with the person who has the appropriate key. The recovery of clear text from such an unscrambled data is deciphering. Enciphering can be implemented by using some substitution technique, shifting technique or even mathematical logics. Application of such types of techniques is difficult to retrieve clear text. In the bygone times, several symmetric key base algorithms have been developed. This paper enlightens and analyzes the substitution ciphers and transposition ciphers. With the comparison of different parameters used in the algorithms give significance of the algorithm.

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Cryptography is the dissertation of securely sending raw information to concerned recipient only. The necessity to secure the data has been increased due to the emerging technologies across the networks Data comprehended to all without any restrictions is nothing but clear text. Cryptanalysis has coevolved together with cryptography and the contest can be traced through the evolution of cryptography. The new ciphers get into limelight from the cons of previous ones and simultaneously new techniques will exist to decipher them. Classical code-breaking integrates analytical reasoning and mathematics. Cryptology underpins cryptography and cryptanalysis. At the Source enciphering has been performed with aid of shared secret key. The recipient performs the deciphering. The algorithms regarding cryptography are analyzed as secret-key cryptography and public key cryptography. This section expound about cryptographic techniques to encipher and decipher the clear text and cipher text respectively.

2. Types of encryption techniques

In cryptography, substitution cipher is a way of enciphering where the clear text is substituted with encrypted text, depending on a constant system. The recipient deciphers the text by performing the inverse substitution whereas in the transposition cipher, clear text is rearranged in a different and complex order, but the alphabets remain unaltered.

2.1. Number of keys includes

There are two types of keys in cryptography referred as public and private keys. The public key is shared between both the sender and receiver. As it is not secret. Private Key is used in situations to decipher where public key is used for enciphering.

Block Cipher and Stream Cipher are the approaches to process clear text. In Stream Ciphers, both enciphering and deciphering happens single bit at a time. In this case, the stream ciphers split the raw information into bits and randomized after that enciphering occurs. In Block Ciphers, block of clear text is enciphered at a time and vice versa. This happens as the unprocessed information is splattered into

Crypto-Stego Technique for Secure Data Transmission

Homer Benny Bandela[1*], M.Ganesh Babu[2] and Donavalli Venkata Vidya Deepthi[3]

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Super Resolution Image Reconstruction Using Iterative Regularization Method and Feed –Forward Neural Networks

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Regularization methods the main purpose is to introduce reasonable constraints to get better image restoration results. There are many improvements in regularization methods, like adaptive regularization parameter method, iterative regularization method, spatially adaptive wavelet method and regularization methods are seen in the literature but still the regularization image restoration process has its own significance in order to image smoothing and recovery.In1960s Harris and Goodman proposed the single-image recovery concepts and methods [1], many of them subsequently conducted a study, and have proposed a variety of recovery methods. After this, taking into account the degraded image is a process of estimating the ill-posed problem, Schultz and Stevenson [2] made

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Dynamic design and implementation of security intelligence for industry

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Abstract: As The development of Internet of Things (IOT) technology became one of the proponents in the industrial revolution 4.0. Digital transformation began to be applied to the entire manufacturing industry, services, transportation and education which have slowly shifted utilizing IOT technology. The industrial revolution 4.0 has an impact on digital transformation and becomes a necessity that can change business patterns such as the ease of data interaction services between industries to customers that are also supported by ease of access and speed of decision making. However, in its development, stakeholders tend to focus on infrastructure and information systems, while the security of information systems is still a comfort zone for industries in the transformation to industry 4.0. The issue of information system security will be a challenge for the industry with open access to information systems; otherwise focus will hamper the business process of the industry. In this research will be discussed about the modeling and implementation of information system security with a combination of web-based security methods with port knocking firewall model and short message service gateway as a security medium with the concept of ease of access with safe and comfortable. The result of this research has been testing penetration testing using network tools.

Index Terms*: *Industry 4.0, cyber security, port knocking, short message service gateway

1. Introduction

The current industrial revolution has grown to 4.0 which replaces industry 3.0. According to [1] and [2] that the basic principle in industry 4.0 is the incorporation of machines, workflows, and systems, by applying intelligent networks along chains and production processes to control each other independently. There are four aspects of the challenges of implementing the industry revolution 4.0 according to Wolter namely information technology security issues, reliability issues and stability of production machinery, lack of adequate skills, lack of motivation of stakeholders to change; and the loss of a lot of work as it turns into automation [3] and [4]. Support of the Internet of Things (IOT) became the most important in the industry revolution 4.0 with open access to information systems and automation changed the way business as its own competitiveness for each industry [5] and [6] According to [7] and [8] security issues will be a challenge for each industry, sometimes for mature industries with adequate resources often overlooking security issues. For medium and small industries some have difficulty and lack of understanding of the security of information systems, stakeholders tend to focus on infrastructure and information systems as digital transformation in the speed of decision making. According to [8] the risks of information system security have an impact, among others, operational risks of Denial-of Service (DDOS) attacks, data theft, website hijacking and reputation risk of lack of trust of business colleagues followed by exposure through media about security vulnerabilities system. In addition, investment risk becomes the most perceived big losses that are large investments but the system is not integrated and the security system used is not in accordance with business needs.

IOT will lead to new problems related to information systems security management, namely the opening of connection lines. This is often used by hackers / hackers to steal data through the network. One of the most important components in an information security management system design is the use of firewalls [9]. The main role and task

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Acceptability analysis method for evaluate data on twitter using support vector machine

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Abstract. The first model centres around believability at the client level, tackling different elements of information stream into a registered validity rating. The next model specifies a methodology to find believability score for singular tweets. We built up the system for validity on Face book by evaluating the validity of: (i) the reliability of the web sources discussing a case, (ii) the dialect style of the articles revealing the case and, (iii) their position. We at that point gathered the preparation information for making a model utilizing Support Vector Machine (SVM). Furthermore the standardization technique is essential advance for purifying information before utilizing the machine learning strategy to order information. The outcome demonstrate that Naïve Bayes to identify the Fake news has precision 96.08%.. We distinguish basic examples of transiently agent discussion subgraphs and speak to their subjects utilizing Latent Dirichlet Allocation (LDA) demonstrating. We break down how the information had proliferated, and the moves were made in light of the source. The component retweet was considered as a proportion of examination to upgrade the reliability of the spread information. The performance of our positioning calculation essentially upgraded when we connected re-positioning system.

1. Introduction

Increased popularity of microblogs as of late realizes a requirement for better systems to extricate dependable or generally valuable information from loud and vast information. While there are an incredible number of concentrates that acquaint strategies with find dependable information, there is no acknowledged validity benchmark. Accordingly, it is difficult to think about various examinations and sum up from their discoveries [1]. The essential concentration and commitment of the paper is on assessment and examination of methodologies of foreseeing tenable information for particular themes on Twitter is imperative test given the bounty of pointless information in the forum [2]. The social believability model , at that point centres around content-based validity, and finally on a half and half of highlights from the two methodologies [3]. There is variety in how reviews are directed, yet the general desire is that the study results are fair aside from the inclination acquainted by the prompts gave the raters, for example, the quantity of retweets for the message, and the manner in which validity is surrounded in the study [4]. Face book clients can refresh status that can be an individual message or pages connect [5]. The upper left tweet gives right about the occasion while The upper right tweet contains no information about the occasion [6]. The base tweet contains related words; it incorporates a URL to a commercial to offer an item, so it is treated as a spam tweet of that occasion [7]. The client can take after another client to get refreshed data about the specific theme spread

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Various Ciphers in Classical Cryptography

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Abstract. Data Encryption is often widely used tool to provide security features. It translates the clear text into code such that it can only be accessed with the person who has the appropriate key. The recovery of clear text from such an unscrambled data is deciphering. Enciphering can be implemented by using some substitution technique, shifting technique or even mathematical logics. Application of such types of techniques is difficult to retrieve clear text. In the bygone times, several symmetric key base algorithms have been developed. This paper enlightens and analyzes the substitution ciphers and transposition ciphers. With the comparison of different parameters used in the algorithms give significance of the algorithm.

Keywords— Enciphering, Deciphering, Cipher text and Clear text.

1. Introduction

Cryptography is the dissertation of securely sending raw information to concerned recipient only. The necessity to secure the data has been increased due to the emerging technologies across the networks Data comprehended to all without any restrictions is nothing but clear text. Cryptanalysis has coevolved together with cryptography and the contest can be traced through the evolution of cryptography. The new ciphers get into limelight from the cons of previous ones and simultaneously new techniques will exist to decipher them. Classical code-breaking integrates analytical reasoning and mathematics. Cryptology underpins cryptography and cryptanalysis. At the Source enciphering has been performed with aid of shared secret key. The recipient performs the deciphering. The algorithms regarding cryptography are analyzed as secret-key cryptography and public key cryptography. This section expound about cryptographic techniques to encipher and decipher the clear text and cipher text respectively.

2. Types of encryption techniques

In cryptography, substitution cipher is a way of enciphering where the clear text is substituted with encrypted text, depending on a constant system. The recipient deciphers the text by performing the inverse substitution whereas in the transposition cipher, clear text is rearranged in a different and complex order, but the alphabets remain unaltered.

2.1. Number of keys includes

There are two types of keys in cryptography referred as public and private keys. The public key is shared between both the sender and receiver. As it is not secret. Private Key is used in situations to decipher where public key is used for enciphering.

Block Cipher and Stream Cipher are the approaches to process clear text. In Stream Ciphers, both enciphering and deciphering happens single bit at a time. In this case, the stream ciphers split the raw information into bits and randomized after that enciphering occurs. In Block Ciphers, block of clear text is enciphered at a time and vice versa. This happens as the unprocessed information is splattered into

Crypto-Stego Technique for Secure Data Transmission

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Abstract: As days are passing, technology is taking its force towards its smartness. But there are some devices which are to be modified for better security results. Cryptography is a technique used for sending secret messages and Steganography is a process related to image. In this paper, we consider Cryptography and Steganography for secure transmission of secret message. The technique used in this paper is to place an image within another image. Encrypted data or Secret data is placed on an image based on pixels and that image is placed as background for other image. When the receiver receives that image he/she thinks it as a normal image but it contains a hidden message and decrypted for original image.

Index Terms: Cryptography, Message, Security, Steganography

1. Introduction

1.1 Computer Networks

Fast growing field in Computer Science and Engineering is Networks. If we are accessing more information from different websites it is because of Computer Networks. Computer Networks are playing a key role in our daily life like Email, Chatting, Whatsapp, Instagram etc. Computer Network technology is now spread to mobiles also. Now a million dollar question is whether we are safe or unsafe in using this type of technology. Figure 1 gives a view of safe or unsafe ambiguity network. Suppose we want to shop online by using computer or mobile, then compulsory last point is payment. When we provide credit card or debit card information it may get notified by the hacker. He/she may misuse the card details for his/her personal work or any other work.

Figure 1: Safe or Unsafe Network

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Performance study of cloud computing for scientific applications

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ABSTRACT. I propose the primary visualization of the cost estimate to evaluate the costs of the cloud database in simple and codified cases from the point of view of an occupant in a intermediate term period. Consider the variability of cloud costs and the chances that the database workload will vary in the evaluation time frame. The proposed model is instantiated in relation to some offers of cloud service providers and related authentic costs. Obviously, adaptable encryption affects the costs recognized with the capacity size and system usage of a database advantage.

1. Introduction

Distributed computing was chosen as a consideration of researchers as a strong advantage for running HPC applications at a potentially low cost. However, as a replacement framework, it is vague whether the mists are ready to run logical applications with a practical tool for every dollar. This work gives a complete assessment of the EC2 cloud around the corner. Initially I divide the possibilities of the cloud by measuring the general implementation of the different AWS administrations [1-3], such as register, memory, system and E / S. In view of the results in rudimentary realizations, and subsequently, I measure the implementation of logical applications in the cloud lastly, unlike the implementation of AWS and a private cloud, with a final goal defined, discover the main driver of its limitations when running logical applications.This project involves studying the ability of the cloud to function properly and, in addition, measuring the cost of the cloud to the extent that both the basic and logical applications are implemented. In addition, I evaluate several administrations, including S3, EBS and Dynamo DB, among the many advantages of AWS, taking into account the final goal of assessing the capabilities of what will be used by applications and logical systems. This also evaluates a true logical logging application through Swift's parallel script framework to resize. Equipped with point-by-point reference points to evaluate the expected tool and a definitive examination of the costs related to money, I hope this document is a recipe book for researchers that allow them to choose where to send and execute their logical applications between the open fogs, private mists, or half-mist of race.

2. Literature review

The study of writing is the most authoritative step in the management of programming progress. It has to consider the time element, the economy and the quality of the organization previous to building the device. Once these things are happy, then successive phases determine which structure and dialect can be used to build the device. Once software engineers start collecting the device, developers need

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Abstract. The first model centres around believability at the client level, tackling different elements of information stream into a registered validity rating. The next model specifies a methodology to find believability score for singular tweets. We built up the system for validity on Face book by evaluating the validity of: (i) the reliability of the web sources discussing a case, (ii) the dialect style of the articles revealing the case and, (iii) their position. We at that point gathered the preparation information for making a model utilizing Support Vector Machine (SVM). Furthermore the standardization technique is essential advance for purifying information before utilizing the machine learning strategy to order information. The outcome demonstrate that Naïve Bayes to identify the Fake news has precision 96.08%.. We distinguish basic examples of transiently agent discussion subgraphs and speak to their subjects utilizing Latent Dirichlet Allocation (LDA) demonstrating. We break down how the information had proliferated, and the moves were made in light of the source. The component retweet was considered as a proportion of examination to upgrade the reliability of the spread information. The performance of our positioning calculation essentially upgraded when we connected re-positioning system.

1. Introduction

Increased popularity of microblogs as of late realizes a requirement for better systems to extricate dependable or generally valuable information from loud and vast information. While there are an incredible number of concentrates that acquaint strategies with find dependable information, there is no acknowledged validity benchmark. Accordingly, it is difficult to think about various examinations and sum up from their discoveries [1]. The essential concentration and commitment of the paper is on assessment and examination of methodologies of foreseeing tenable information for particular themes on Twitter is imperative test given the bounty of pointless information in the forum [2]. The social believability model , at that point centres around content-based validity, and finally on a half and half of highlights from the two methodologies [3]. There is variety in how reviews are directed, yet the general desire is that the study results are fair aside from the inclination acquainted by the prompts gave the raters, for example, the quantity of retweets for the message, and the manner in which validity is surrounded in the study [4]. Face book clients can refresh status that can be an individual message or pages connect [5]. The upper left tweet gives right about the occasion while The upper right tweet contains no information about the occasion [6]. The base tweet contains related words; it incorporates a URL to a commercial to offer an item, so it is treated as a spam tweet of that occasion [7]. The client can take after another client to get refreshed data about the specific theme spread

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Dynamic security for multi-user access control in distributed environment

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Abstract: Cloud computing is an on-demand facilities that allows customers to access processing sources and services from anywhere and at any time. Information protection means defending the information from illegal individuals or online hackers. We propose Integrated Group Sharing Approach (IGSA) schema for multiple customer accessibility control in customer operations like information insertion, deletion and in customer cancellation immediately reasoning database integration. We look at the security of IGSA plan and assess with the current IGSA techniques which are used for information access immediately reasoning computing for achieving real-time applications in reasoning. Our experimental results show efficient information removal from multiple customer accessibility in search of information from reasoning server. In future, some protection systems are to be developed to provide protection to cloud.

Index Terms: Cloud Computing, IGSA, Secure Multi key Word Search.

1. Introduction

Distributed computing is an on-request framework that empowers clients to get to processing assets and administrations from anyplace and whenever. There are three sorts of administrations in cloud. They are

1.SaaS (Software-as-a-benefit) : The Cloud supplier offers programming on-request.
2.PaaS (Platform-as-a-benefit) : The Cloud supplier offers a stage to client for their undertakings.
3. IaaS (Infrastructure - as-a-benefit): The Cloud suppliers offer equipment assets or on the other hand foundation to client. At the point then the client get to the information from cloud specialist organization, there is a probability of assaulting the information.

Figure 1: Advanced key distribution in cloud server environment.

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CONTENTS

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An ensemble integrated mailing system for detecting spam mails

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Abstract. In Internet, today most widely issues occur with security. Security plays the vital role in Internet. Many software and hardware systems are affecting with the security issues. This may cause major problem for the companies to maintain the network securely. Attackers mainly concentrate on attacking the servers and systems with any type of malware and virus to hack the system or mail account. Today the most popular attacking by the attackers are spam mails. This brings lot of security issues if it is implemented in gmail, yahoo and other mail service providers. Spam zombies are the spam activities done by the spam developers to attack the system. In this paper, an ensemble spam mail detection system named ESMDS by observing outgoing and incoming messages of a network. ESMDS is developed based on a powerful analysis tool called Sequential Probability Ratio Test (SPRT). Results show the performance of the ESMDS.

1. Introduction

Recent years a mail plays the major role for sending and receiving the messages and also attached with the files. Spam is rehearsing in inutility, storage and similarity knowledge transfer capability. The problem of spam email has been increasing for a substantial length of your time. In in progress insights, four-hundredth of all messages square measure spam that around fifteen.4 billion email for every day which price internet purchasers regarding $355 million per annum. Programmed email separating is evidently the slightest complex framework for countering spam straight away and a decent group action among spammers and spam-sifting methods goes on. Simply quite a whereas back the bulk of the spam may well be faithfully managed by interference messages originating from specific locations or separation through messages with sure titles. Spammers began to use a couple of precarious methods to overcome the separation methods like using sporadic sender tends to even now as attach incautious characters to the start or the finish of the message title [11].

Data coming up with and machine learning square measure the 2 general methodologies used in email separating. In data coming up with methodology a meeting of tenets should be determined by that messages square measure sorted. Implementing this strategy, no encouraging outcomes demonstrate in lightweight of the actual fact that the principles should be perpetually invigorated and preserved or, in alternative words of your time and it's not advantageous for usual, purchasers. ML method is improved than associate data building method; it does not need decisive any tenets [4]. Rather, a meeting of making ready tests, these examples are a meeting of pre-grouped email messages. A specific algorithm is then wont to absorb the arrangement rules from these email messages. Machine learning approach has been usually thought of and there square measure various calculations will be used in email separating. They

Ensemble path finding in wireless sensor networks

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Abstract: A wireless sensor network (WSN) plays the major role in providing the network for the various scenarios. It consists of various nodes and base stations that are used to communicate the nodes and transfer the data from source to destination and in between the nodes. The important parameters of the WSN are accuracy, computation time and shortest path between the nodes. Various existing approaches are available to get the results. But the existing approaches are not performed well. In this paper, the ensemble path finding is implemented to solve issues identified in the existing system. The proposed system shows the performance based on accuracy, computation time and shortest dynamic path.

1. Introduction

The utilization of WSNs for info correspondence and handling is developing quickly. A framework of WSNs relies on an intensive range of free sensor hubs and a base station, with the bottom station going concerning as a portal to a different system. A sink node often serves the duty of the base station; this might be a digital computer or a computer framework that gathers information and examinations it to decide on fitting selections [1]. Various types of sensor nodes will frame a WSN, as well as low examining rate enticing, warm, visual, infrared and acoustic [1]. The sensor on each node will acknowledge wonders, as an example, light, weight, warm, so forth [2]. The sensor is outfitted with a bit battery as an influence provides, which suggests that the system execution is extremely dependent on the speed of energy utilization.

With the continuing accomplishment within the field of sensors, the constant application has inflated clear thought among technocrats and scientists. With the top goal to kill the difficulties of the sensors, technologists and scientists found a solution by conveyance the continuing utilizations of Wireless sensor network (WSN). The constant sensors can momentarily notice, record, and send criticism to the top shopper for more making ready of the got information. Above all, the continual application is disturbed concerning the execution of basic applications that require restricted defer dormancy. Current remote correspondence could be a rising application field of WSNs that includes a potential noteworthy analysis course. Current applications able to screen, react promptly to shopper info, or management Associate in Nursing outer scenario. The outer condition is related to the computer framework through sensors, actuators, and knowledge yield gadgets. Remote device organizes that empower the system restricted defer guarantee, or, in alternative words the conclusion to finish bundle conveyance, the square measure named as constant WSN [1]

Enhanced path recreation in remote sensor networks

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Abstract: The remote specially appointed systems comprise of a gathering of remote hubs that impart over a typical remote medium. The hubs impart without a framework, for example, base station, wired passage, and so forth. The foundation of the systems must be in an appropriated and decentralized way. In this manner, the many-sided quality of the systems is in the hubs self. The hubs must have the capacity to take care of system's concern, for example, directing and security. Regardless of the specialized difficulties, the interests of the impromptu systems increment quickly as of late, in light of the fact that they bolster portability and are exceptionally appropriate for some troublesome circumstances, such protect mission, military, vehicular interchanges, and so forth. In this review article, I present the idea of remote impromptu systems and uncommonly portable specially appointed system (MANET), their engineering, purposes, applications, preferences, burdens, and correlation with framework systems.

1. Introduction

Remote specially appointed systems are accumulations of remote hubs that convey straightforwardly over a typical remote channel. The hubs are outfitted with remote handset. They needn't bother with any extra foundation, for example, base station or wired passage, and so on. Consequently, every hub doesn't just assume the job of an end framework, yet in addition goes about as a switch, that sends parcels to wanted hubs.

The impromptu are relied upon to do assignments, which the framework can't do. Impromptu systems are for the most part utilized by military, save mission group, cab driver. Their works can't depend on a framework's system. As an illustrative precedent, envision fire-fighters put out dangerous fire in major woodland. They need to impart one another; however building up a foundation or cabling in such region is unthinkable or excessively costly.

The primary issues in specially appointed systems are steering and normal for remote correspondence. In foundation's systems a hub can speak with all hubs in a similar cell. In impromptu a hub can discuss just with hubs in its territory. this hub can speak with different hubs, yet a directing calculation is fundamental. Not at all like wired correspondence, have remote systems had transmission issue with information trans-mission, for example, probability of hilter kilter associations and higher obstructions. The point of this review article is to give information's on impromptu systems and uncommonly MANET, their structure, their applications on the present time, and also their solid and shortcoming in examination with framework systems. Area 2 presents specially appointee's engineering and its

Implementation of data mining techniques in web of things

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Abstract Web of Things has been becoming quickly because of late progressions in interchanges and sensor advances. Interfacing an each question together through web looks extremely trouble some, however inside a casing of time Internet of Things will definitely change our life. The tremendous information caught by the web of Things are considered of high business and also social qualities and removing concealed data from crude information, different information mining calculation can be connected to web of things information. In this paper, We study efficient audit of different information mining models and also its application in web of Thing field alongside its benefits and negative marks.

1. Introduction

The net of Things suggests the type of the system which relate something i. e. Physical articles gizmos, frameworks, autos and different issues implanted with development, sensors and structure arranged up circumstance to agreed customs that permits these matters to unite and operate measurements. In our every day lives, we have ended up being much more relying after net of elements with our wearable tech, mechanical assemblies, our vehicles, how we get restorative administrations. Due to Seamless turning into someone from of regular set ups with web of components, it permits a massive vision that things might be effectively found and overseen which prompts to voluminous data. Consequently, with the stop objective to make web of things more noteworthy short witted, loads of insights assessment is required for which a champion among the greatest opportunity is measurements exploration. Much examinations as of past due has targeted on records mining in web of Things which relates materially protests, persona to character, character to framework or gizmo to gizmo by means of web and manages measurements.

Data mining system signifies the method for semi by mechanical means looking at huge directories as a case exploration that are creative, genuine, important and reasonable that is in some other case alluded to as Knowledge Discovery in Data source. Data mining contains trouble plan, insights aggregation, data cleaning i. e. Preprocessing, change, choosing mining errand/system and final product assessment/idea. Data disclosure is an iterative technique.

A new dynamic and enhanced resource allocation algorithm in cloud computing

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Abstract. One of the testing issues in Cloud data centers is to take the segment and relocation of reconfigurable virtual machines into thought and moreover the joined features of facilitating physical machines. We present a dynamic resource assignment framework (DRAM) for Cloud data centers. Dissimilar to customary stack balance arranging calculations which consider only a solitary factor, for instance, the CPU stack in physical servers, this strategy treats CPU, memory and framework information transmission composed for both physical machines and virtual machines. We create joined estimation for the all out irregularity dimension of a Cloud data center and furthermore the ordinary disproportion dimension of each server. Reproduction results show that DRAM has great execution as of indicate abnormality level, normal ponderousness dimension of each server, too as in general running time.

1. Introduction

Cloud computing creates as each other figuring perspective which hopes to give reliable, changed and QoS (Quality of Service) guaranteed registering dynamic conditions for end-customers [22].Distributed making prepared, parallel adapting to and grid processing altogether ascended as distributed computing. The vital boundless of cloud computing is that customer measurements isn't put away provincially yet is secured inside the server homestead of net. The associations which give cloud computing organization could manage and keep up the assignment of these server ranches. The customers can get to the set away data at whatever point by using Application Programming Interface given by cloud providers entirely through any terminal apparatus related with web. Not solely are limit organizations gave yet what's more gear and programming organizations are open to the general populace and business markets.

The organizations given by utilizing authority associations can be the aggregate, since the system, stage or programming sources. Each such administration is in my view called Infrastructure as a Service, Platform as a Service. There are different conceivable outcomes of distributed computing, the great many people fundamental ones being lesser costs, re-provisioning of assets and way away receptiveness. Distributed computing cuts down cost by means of avoiding the essential utilization with the association in renting the material establishment from an untouchable provider.

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Survey: Image forgery and its detection techniques

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Abstract. Image forgery is the most widely used technique in various applications and used in the various investigations to find the duplicate images in social media, social networking etc. Many forgery techniques are done to get the better results on finding the duplicate images. This paper, mainly focused on discussing the different strategies connected with making the fraud picture.

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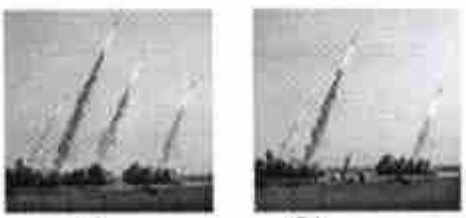
Image manipulating and change of state will affect the images or photos. Various software's are available to change the image parameters such as pixels, size and resolution. Thanks to this, there is also a fast boom of the image forgery in newspapers, TV and social media. Associate instance for photograph forgery is shown in Fig.1.This trend leads to severe vulnerabilities and loss of believability within the digital snap shots. Thus detection of image forgery is significant, as a result of the pictures are provided as proof in an exceedingly court docket. During this feel, photograph forgery detection is that the valuable enchantment of image forensics. in recent times, an outsized form of researchers have all began to specialize in the matter of virtual photograph forgery. copy-pass image forgery could be a common class of image forgery, that is to stay one or various derived region of associate image graph into different a part of the identical photo. throughout the duplicate and flow into forgery, photograph process techniques comprehensive of rotation, scaling, blurring, compression, and noise addition are meted out to create convincing forgeries. Associate instance for this sort of forgery is also seen in Fig.2, during which a bunch of individuals are derived and glued to hide President George W. Bush. this technique is also finished with none changes on the duplicated elements. Because of the convenience of use copy flow exposure forgery is incredibly common. Currently, several authors studied the difficulty of sleuthing those forgeries, considering the character of region duplication; there are a minimum of 2 comparable areas during a solid exposure.



(a) (b)

Figure 1. Copy-move forgery:(a) the Duplicated image with four missiles & (b) the original image with three missiles.

Ensemble path finding in wireless sensor networks

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Abstract: A wireless sensor network (WSN) plays the major role in providing the network for the various scenarios. It consists of various nodes and base stations that are used to communicate the nodes and transfer the data from source to destination and in between the nodes. The important parameters of the WSN are accuracy, computation time and shortest path between the nodes. Various existing approaches are available to get the results. But the existing approaches are not performed well. In this paper, the ensemble path finding is implemented to solve issues identified in the existing system. The proposed system shows the performance based on accuracy, computation time and shortest dynamic path.

1. Introduction

The utilization of WSNs for info correspondence and handling is developing quickly. A framework of WSNs relies on an intensive range of free sensor hubs and a base station, with the bottom station going concerning as a portal to a different system. A sink node often serves the duty of the base station; this might be a digital computer or a computer framework that gathers information and examinations it to decide on fitting selections [1]. Various types of sensor nodes will frame a WSN, as well as low examining rate enticing, warm, visual, infrared and acoustic [1]. The sensor on each node will acknowledge wonders, as an example, light, weight, warm, so forth [2]. The sensor is outfitted with a bit battery as an influence provides, which suggests that the system execution is extremely dependent on the speed of energy utilization.

With the continuing accomplishment within the field of sensors, the constant application has inflated clear thought among technocrats and scientists. With the top goal to kill the difficulties of the sensors, technologists and scientists found a solution by conveyance the continuing utilizations of Wireless sensor network (WSN). The constant sensors can momentarily notice, record, and send criticism to the top shopper for more making ready of the got information. Above all, the continual application is disturbed concerning the execution of basic applications that require restricted defer dormancy. Current remote correspondence could be a rising application field of WSNs that includes a potential noteworthy analysis course. Current applications able to screen, react promptly to shopper info, or management Associate in Nursing outer scenario. The outer condition is related to the computer framework through sensors, actuators, and knowledge yield gadgets. Remote device organizes that empower the system restricted defer guarantee, or, in alternative words the conclusion to finish bundle conveyance, the square measure named as constant WSN [1]

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Implementation of data mining techniques in web of things

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Abstract Web of Things has been becoming quickly because of late progressions in interchanges and sensor advances. Interfacing an each question together through web looks extremely trouble some, however inside a casing of time Internet of Things will definitely change our life. The tremendous information caught by the web of Things are considered of high business and also social qualities and removing concealed data from crude information, different information mining calculation can be connected to web of things information. In this paper, We study efficient audit of different information mining models and also its application in web of Thing field alongside its benefits and negative marks.

1. Introduction

The net of Things suggests the type of the system which relate something i. e. Physical articles gizmos, frameworks, autos and different issues implanted with development, sensors and structure arranged up circumstance to agreed customs that permits these matters to unite and operate measurements. In our every day lives, we have ended up being much more relying after net of elements with our wearable tech, mechanical assemblies, our vehicles, how we get restorative administrations. Due to Seamless turning into someone from of regular set ups with web of components, it permits a massive vision that things might be effectively found and overseen which prompts to voluminous data. Consequently, with the stop objective to make web of things more noteworthy short witted, loads of insights assessment is required for which a champion among the greatest opportunity is measurements exploration. Much examinations as of past due has targeted on records mining in web of Things which relates materially protests, persona to character, character to framework or gizmo to gizmo by means of web and manages measurements.

Data mining system signifies the method for semi by mechanical means looking at huge directories as a case exploration that are creative, genuine, important and reasonable that is in some other case alluded to as Knowledge Discovery in Data source. Data mining contains trouble plan, insights aggregation, data cleaning i. e. Preprocessing, change, choosing mining errand/system and final product assessment/idea. Data disclosure is an iterative technique.

Enhanced path recreation in remote sensor networks

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Abstract: The remote specially appointed systems comprise of a gathering of remote hubs that impart over a typical remote medium. The hubs impart without a framework, for example, base station, wired passage, and so forth. The foundation of the systems must be in an appropriated and decentralized way. In this manner, the many-sided quality of the systems is in the hubs self. The hubs must have the capacity to take care of system's concern, for example, directing and security. Regardless of the specialized difficulties, the interests of the impromptu systems increment quickly as of late, in light of the fact that they bolster portability and are exceptionally appropriate for some troublesome circumstances, such protect mission, military, vehicular interchanges, and so forth. In this review article, I present the idea of remote impromptu systems and uncommonly portable specially appointed system (MANET), their engineering, purposes, applications, preferences, burdens, and correlation with framework systems.

1. Introduction

Remote specially appointed systems are accumulations of remote hubs that convey straightforwardly over a typical remote channel. The hubs are outfitted with remote handset. They needn't bother with any extra foundation, for example, base station or wired passage, and so on. Consequently, every hub doesn't just assume the job of an end framework, yet in addition goes about as a switch, that sends parcels to wanted hubs.

The impromptu are relied upon to do assignments, which the framework can't do. Impromptu systems are for the most part utilized by military, save mission group, cab driver. Their works can't depend on a framework's system. As an illustrative precedent, envision fire-fighters put out dangerous fire in major woodland. They need to impart one another; however building up a foundation or cabling in such region is unthinkable or excessively costly.

The primary issues in specially appointed systems are steering and normal for remote correspondence. In foundation's systems a hub can speak with all hubs in a similar cell. In impromptu a hub can discuss just with hubs in its territory. this hub can speak with different hubs, yet a directing calculation is fundamental. Not at all like wired correspondence, have remote systems had transmission issue with information trans-mission, for example, probability of hilter kilter associations and higher obstructions. The point of this review article is to give information's on impromptu systems and uncommonly MANET, their structure, their applications on the present time, and also their solid and shortcoming in examination with framework systems. Area 2 presents specially appointee's engineering and its

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A comparative performance analysis of different machine learning techniques

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Abstract. Over the past many decades, Machine Learning (ML) has advanced from the undertaking of few PC fans misusing the likelihood of PCs figuring out how to play diversions, and a piece of Mathematics (Statistics) that only here and there measured computational methodologies, to an autonomous research obedience that has not just given the essential base to measurable computational standards of learning systems, yet in addition has created different calculations that are routinely utilized for content translation, design acknowledgment, and a numerous other business purposes and has prompted a different research enthusiasm for information mining to recognize shrouded regularities or abnormalities in social information that developing by second. This paper centers around clarifying the idea and development of Machine Learning, a portion of the well known Machine Learning calculations and endeavor to think about three most prevalent calculations dependent on some essential thoughts. Sentiment140dataset was utilized and execution of every calculation as far as preparing time, forecast time and precision of expectation have been reported and analyzed.

1. Introduction

Because of innovative enhancements and development, a monstrous measure of information is produced in an extensive variety of fields like bioinformatics, human services, web based life, training, back et cetera. Consequently an expanding volume of information, accessibility of various classes of information and improving computational preparing have made machine learning (ML) – an essential angle in the field of artificial intelligence (AI). ML is the most vital information examination techniques which iteratively gain from the accessible information by utilizing calculations. ML takes after iterative attributes, since the models are permitted to acknowledge the new information. ML strategies build up a model from the given data sources. From the models, a huge forecasts and choices might be gotten. Hence, ML systems allow the PCs to gain from the given information and develop a model to anticipate the future information. The point of ML methods is to improve the learning capability of PCs. ML procedures assume a crucial job in numerous applications in the fields of internet based life, training, back, bioinformatics, medicinal services, vitality holds, and climate forecast et cetera. The four ML calculations like irregular woods, neural networks (NNs), found the middle value of NNs and bolster vector machine (SVM) for precipitation territory recognition and precipitation rate task[4]. The NNs and arrived at the midpoint of NNs were distinguished as the most reasonable calculations in light of

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A frame work for mining huge data by non-expert users with the assistance of knowledge base

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Abstract. Data mining is the examination of (regularly huge) observational enlightening files to find unsuspected associations and to plot the data in novel ways that are both legitimate and valuable to the information proprietor. At the end of the day information mining is a procedure of finding beforehand obscure, beneficial and utilizes designs covered up in information, with no earlier theory. Robotized Data Mining and demonstrating programming gives supervisors a device to perform examinations that generally would should be dealt with by an exceptionally prepared specialist. Robotized information mining systems isn't to give more exact outcomes yet endeavors to enable non expert clients to accomplish sensible outcomes with least exertion .Data mining is a troublesome and arduous action that requires a lot of mastery for acquiring quality outcomes. We require new techniques for wise information investigation to separate important data with less exertion. For that in this paper we propose an edge work with the assistance of learning base. That will be tried on e-realizing which creates better outcomes.

1. Introduction

The expanding accessibility of information is an incredible open door for everybody to exploit their examination. The "huge information guarantee" expresses that the more information you have, the more examination you can perform, and afterward, the more educated choices you can make. Tragically, this could be valid for experts in information examination (the alleged, information researchers) or for those organizations that may contract them; at the same time, shouldn't something be said about non-specialists information miners? Physicians in clinics, educators in secondary schools or colleges, et cetera; would be occupied with applying propelled information investigation methods to settle on educated choices in their everyday life. Vitally, information mining is a standout amongst the most conspicuous system to find understood learning designs, in this way increasing more extravagant bits of knowledge into information. In any case, non-expert clients may discover complex to apply information mining methods to get helpful outcomes, because of the way that it is an inherently complex process [7] in which (I) an awesome number of calculations can be connected to take care of a similar issue with various results, and (ii) accurately applying information mining strategies dependably requires a considerable measure of manual exertion for setting up the datasets as indicated by their highlights. Therefore, effectively applying information mining requires the skill of an expert with a specific end goal to get dependable and valuable learning in the subsequent examples. Democratization of information mining hence requires depending on learning about reasonable information mining systems and settings as indicated by their information highlights. Simple to utilize data mining [6] is a phase forward to this democratization, since it energizes

Data productive collaborative filtering using deep learning based recommender model

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Abstract: The term Synergistic Filtering is utilized as a spine in all Commercial Recommendation Systems today. Conventional synergistic separating (CF) strategy does not take in thought successions of client's appraising, which reflects changes of client's inclination over some stretch of time. The suggestion undertaking is affected by the profound learning pattern which demonstrates its critical effectiveness. The profound learning based recommender models give a superior detainment of client inclinations, thing highlights and clients things connections history. The proposed structure incorporates three segments: a network factorization demonstrates for the watched rating remaking, a bi-grouping model for the client thing subgroup examination. We recognize uninteresting things that have not been assessed yet rather are presumably going to get low evaluations from customers, and particularly attribute them as low regards. One imperative undertaking in our rating induction structure is the assurance of nostalgic introductions (SO) and qualities of sentiment words. It is on the grounds that deducing a rating from a survey is fundamentally done by removing conclusion words in the audit, and afterward amassing the SO of such words to decide the predominant or normal assumption suggested by the client. The proposed structure and recommend that the system does not depend on a substantial preparing corpus to work. Advance improvement of our rating derivation structure is progressing. Trial results demonstrate that the proposed system indicate changes over the conventional community oriented sifting strategy.

Index Terms: Idea float, Trust, Cold-begin, Hybrid model, float, consecutive example mining, recommender system, profound learning, neural network, YouTube suggestion, Matrix factorization, client thing subgroup.

1. Introduction

A significant part of the information on the Internet today comprises of archives made accessible to numerous beneficiaries through mailing records, dissemination records, notice sheets, non-concurrent PC gatherings, newsgroups, and the World Wide Web [1-6]. Our fundamental commitment is that a novel recommender system for film area in view of continuous consecutive example mining with time interim. The proposed recommender system creates examples of classes of things as disconnected continuous successive process which will be utilized in online procedure to change the review things delivered by convention collaborative filtering. In the ongoing decades, the profound learning has seen

A new dynamic and enhanced resource allocation algorithm in cloud computing

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Abstract. One of the testing issues in Cloud data centers is to take the segment and relocation of reconfigurable virtual machines into thought and moreover the joined features of facilitating physical machines. We present a dynamic resource assignment framework (DRAM) for Cloud data centers. Dissimilar to customary stack balance arranging calculations which consider only a solitary factor, for instance, the CPU stack in physical servers, this strategy treats CPU, memory and framework information transmission composed for both physical machines and virtual machines. We create joined estimation for the all out irregularity dimension of a Cloud data center and furthermore the ordinary disproportion dimension of each server. Reproduction results show that DRAM has great execution as of indicate abnormality level, normal ponderousness dimension of each server, too as in general running time.

1. Introduction

Cloud computing creates as each other figuring perspective which hopes to give reliable, changed and QoS (Quality of Service) guaranteed registering dynamic conditions for end-customers [22].Distributed making prepared, parallel adapting to and grid processing altogether ascended as distributed computing. The vital boundless of cloud computing is that customer measurements isn't put away provincially yet is secured inside the server homestead of net. The associations which give cloud computing organization could manage and keep up the assignment of these server ranches. The customers can get to the set away data at whatever point by using Application Programming Interface given by cloud providers entirely through any terminal apparatus related with web. Not solely are limit organizations gave yet what's more gear and programming organizations are open to the general populace and business markets.

The organizations given by utilizing authority associations can be the aggregate, since the system, stage or programming sources. Each such administration is in my view called Infrastructure as a Service, Platform as a Service. There are different conceivable outcomes of distributed computing, the great many people fundamental ones being lesser costs, re-provisioning of assets and way away receptiveness. Distributed computing cuts down cost by means of avoiding the essential utilization with the association in renting the material establishment from an untouchable provider.

Survey: Image forgery and its detection techniques

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A frame work for mining huge data by non-expert users with the assistance of knowledge base

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An ensemble integrated mailing system for detecting spam mails

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Abstract. In Internet, today most widely issues occur with security. Security plays the vital role in Internet. Many software and hardware systems are affecting with the security issues. This may cause major problem for the companies to maintain the network securely. Attackers mainly concentrate on attacking the servers and systems with any type of malware and virus to hack the system or mail account. Today the most popular attacking by the attackers are spam mails. This brings lot of security issues if it is implemented in gmail, yahoo and other mail service providers. Spam zombies are the spam activities done by the spam developers to attack the system. In this paper, an ensemble spam mail detection system named ESMDS by observing outgoing and incoming messages of a network. ESMDS is developed based on a powerful analysis tool called Sequential Probability Ratio Test (SPRT). Results show the performance of the ESMDS.

1. Introduction

Recent years a mail plays the major role for sending and receiving the messages and also attached with the files. Spam is rehearsing in inutility, storage and similarity knowledge transfer capability. The problem of spam email has been increasing for a substantial length of your time. In in progress insights, four-hundredth of all messages [1]square measure spam that around fifteen.4 billion email for every day which price internet purchasers regarding $355 million per annum. Programmed email separating is evidently the slightest complex framework for countering spam straight away and a decent group action among spammers and spam-sifting methods goes on. Simply quite a whereas back the bulk of the spam may well be faithfully managed by interference messages originating from specific locations or separation through messages with sure titles. Spammers began to use a couple of precarious methods to overcome the separation methods like using sporadic sender tends to even now as attach incautious characters to the start or the finish of the message title [11].

Data coming up with and machine learning square measure the 2 general methodologies used in email separating. In data coming up with methodology a meeting of tenets should be determined by that messages square measure sorted. Implementing this strategy, no encouraging outcomes demonstrate in lightweight of the actual fact that the principles should be perpetually invigorated and preserved or, in alternative words of your time and it's not advantageous for usual, purchasers. ML method is improved than associate data building method; it does not need decisive any tenets [4]. Rather, a meeting of making ready tests, these examples are a meeting of pre-grouped email messages. A specific algorithm is then wont to absorb the arrangement rules from these email messages. Machine learning approach has been usually thought of and there square measure various calculations will be used in email separating. They

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E-SRA: Ensemble selfish routing algorithm

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***Abstract*:** Remote coordinating is the rapidly creating zone in present world to make correspondence between the center points. It is to a great degree obvious in nature to evaluate the center point openness and data transmission of center points. It is basic to realize the cunning guiding in the present territory to trade the data from source to objective which keeps up the imperativeness and information exchange limit between the center points. In this paper, the proposed gathering extremist coordinating estimation executes the dynamic course and keeps up the steady essentialness and at the every center point and moreover the information transmission at the center points. The results exhibit the execution of the proposed system.

1. Introduction

The In multi-skip remote structures, the puerile coordinating has for an extended however been foreseen to unwind the issues of customary directing [1]– [5]. Standard recognizing mitigates the impact of poor remote relationship by abusing the present system for remote transmissions and as needs be the technique particular properties. All the piece of definitely, the leading planning decisions are made in a web course by picking the spontaneous move in lightweight of the genuine transmission results and in like way a rank requesting of neighbouring focus centre interests. The designers in [4] gave a Markov decision theoretic definition for starting overseeing and a headed along structure for two or three changes of sharp coordinative [1]– [3], with the collections in sight of the creators' determinations of costs.

In particular, it's depicted that for any bundle, the best possible steering call, inside the slant of least cost or ricochet count, is to pick the accidental hand-off kilter in context in perspective of rundown. This report is proportional to fundamental cost or ricochet count of radiating the bundle on the most minor expensive or the first elliptic convenient course to the objective. Right once totally extraordinary floods of bundles are to cross the system, in any case, it'd beguile course a couple of groups on longer or only a great deal of extreme manners by which, if these manners by which ineluctably affect to affiliations that are less engorged. only a great deal of unambiguously, as noted in [6], [7], the leading prevailing plans in [1]– [5] will probably come through uncommon blockage and tremendous deferral (see the cases given in [6]). Obviously, it's appreciated that an adroit kind Of backpressure [8], contrasts backpressure dominating (DIVBAR) [7] guarantees certain predicted overall riches for all stabilizable segment charges. To certify yield optimality (restrained expected general abundance for all stabilizable touchdown charges), backpressure-primarily based estimations [7], [8] come via one element with the

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Abstract. Image forgery is the most widely used technique in various applications and used in the various investigations to find the duplicate images in social media, social networking etc. Many forgery techniques are done to get the better results on finding the duplicate images. This paper, mainly focused on discussing the different strategies connected with making the fraud picture.

1. Introduction

Image manipulating and change of state will affect the images or photos. Various software's are available to change the image parameters such as pixels, size and resolution. Thanks to this, there is also a fast boom of the image forgery in newspapers, TV and social media. Associate instance for photograph forgery is shown in Fig.1.This trend leads to severe vulnerabilities and loss of believability within the digital snap shots. Thus detection of image forgery is significant, as a result of the pictures are provided as proof in an exceedingly court docket. During this feel, photograph forgery detection is that the valuable enchantment of image forensics. in recent times, an outsized form of researchers have all began to specialize in the matter of virtual photograph forgery. copy-pass image forgery could be a common class of image forgery, that is to stay one or various derived region of associate image graph into different a part of the identical photo. throughout the duplicate and flow into forgery, photograph process techniques comprehensive of rotation, scaling, blurring, compression, and noise addition are meted out to create convincing forgeries. Associate instance for this sort of forgery is also seen in Fig.2, during which a bunch of individuals are derived and glued to hide President George W. Bush. this technique is also finished with none changes on the duplicated elements. Because of the convenience of use copy flow exposure forgery is incredibly common. Currently, several authors studied the difficulty of sleuthing those forgeries, considering the character of region duplication; there are a minimum of 2 comparable areas during a solid exposure.

(a) (b)

Figure 1. Copy-move forgery:(a) the Duplicated image with four missiles & (b) the original image with three missiles.

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A frame work for mining huge data by non-expert users with the assistance of knowledge base

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Abstract. Data mining is the examination of (regularly huge) observational enlightening files to find unsuspected associations and to plot the data in novel ways that are both legitimate and valuable to the information proprietor. At the end of the day information mining is a procedure of finding beforehand obscure, beneficial and utilizes designs covered up in information, with no earlier theory. Robotized Data Mining and demonstrating programming gives supervisors a device to perform examinations that generally would should be dealt with by an exceptionally prepared specialist. Robotized information mining systems isn't to give more exact outcomes yet endeavors to enable non expert clients to accomplish sensible outcomes with least exertion .Data mining is a troublesome and arduous action that requires a lot of mastery for acquiring quality outcomes. We require new techniques for wise information investigation to separate important data with less exertion. For that in this paper we propose an edge work with the assistance of learning base. That will be tried on e-realizing which creates better outcomes.

1. Introduction

The expanding accessibility of information is an incredible open door for everybody to exploit their examination. The "huge information guarantee" expresses that the more information you have, the more examination you can perform, and afterward, the more educated choices you can make. Tragically, this could be valid for experts in information examination (the alleged, information researchers) or for those organizations that may contract them; at the same time, shouldn't something be said about non-specialists information miners? Physicians in clinics, educators in secondary schools or colleges, et cetera; would be occupied with applying propelled information investigation methods to settle on educated choices in their everyday life. Vitally, information mining is a standout amongst the most conspicuous system to find understood learning designs, in this way increasing more extravagant bits of knowledge into information. In any case, non-expert clients may discover complex to apply information mining methods to get helpful outcomes, because of the way that it is an inherently complex process [7] in which (f) an awesome number of calculations can be connected to take care of a similar issue with various results, and (ii) accurately applying information mining strategies dependably requires a considerable measure of manual exertion for setting up the datasets as indicated by their highlights. Therefore, effectively applying information mining requires the skill of an expert with a specific end goal to get dependable and valuable learning in the subsequent examples. Democratization of information mining hence requires depending on learning about reasonable information mining systems and settings as indicated by their information highlights. Simple to utilize data mining [6] is a phase forward to this democratization, since it energizes

Implementation of data mining techniques in web of things

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Abstract Web of Things has been becoming quickly because of late progressions in interchanges and sensor advances. Interfacing an each question together through web looks extremely trouble some, however inside a casing of time Internet of Things will definitely change our life. The tremendous information caught by the web of Things are considered of high business and also social qualities and removing concealed data from crude information, different information mining calculation can be connected to web of things information. In this paper, We study efficient audit of different information mining models and also its application in web of Thing field alongside its benefits and negative marks.

1. Introduction

The net of Things suggests the type of the system which relate something i. e. Physical articles gizmos, frameworks, autos and different issues implanted with development, sensors and structure arranged up circumstance to agreed customs that permits these matters to unite and operate measurements. In our every day lives, we have ended up being much more relying after net of elements with our wearable tech, mechanical assemblies, our vehicles, how we get restorative administrations. Due to Seamless turning into someone from of regular set ups with web of components, it permits a massive vision that things might be effectively found and overseen which prompts to voluminous data. Consequently, with the stop objective to make web of things more noteworthy short witted, loads of insights assessment is required for which a champion among the greatest opportunity is measurements exploration. Much examinations as of past due has targeted on records mining in web of Things which relates materially protests, persona to character, character to framework or gizmo to gizmo by means of web and manages measurements.

Data mining system signifies the method for semi by mechanical means looking at huge directories as a case exploration that are creative, genuine, important and reasonable that is in some other case alluded to as Knowledge Discovery in Data source. Data mining contains trouble plan, insights aggregation, data cleaning i. e. Preprocessing, change, choosing mining errand/system and final product assessment/idea. Data disclosure is an iterative technique.

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E-SRA: Ensemble selfish routing algorithm

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Abstract: Remote coordinating is the rapidly creating zone in present world to make correspondence between the center points. It is to a great degree obvious in nature to evaluate the center point openness and data transmission of center points. It is basic to realize the cunning guiding in the present territory to trade the data from source to objective which keeps up the imperativeness and information exchange limit between the center points. In this paper, the proposed gathering extremist coordinating estimation executes the dynamic course and keeps up the steady essentialness and at the every center point and moreover the information transmission at the center points. The results exhibit the execution of the proposed system.

1. Introduction

The In multi-skip remote structures, the puerile coordinating has for an extended however been foreseen to unwind the issues of customary directing [1]– [5]. Standard recognizing mitigates the impact of poor remote relationship by abusing the present system for remote transmissions and as needs be the technique particular properties. All the piece of definitely, the leading planning decisions are made in a web course by picking the spontaneous move in lightweight of the genuine transmission results and in like way a rank requesting of neighbouring focus centre interests. The designers in [4] gave a Markov decision theoretic definition for starting overseeing and a headed along structure for two or three changes of sharp coordinative [1]– [3], with the collections in sight of the creators' determinations of costs.

In particular, it's depicted that for any bundle, the best possible steering call, inside the slant of least cost or ricochet count, is to pick the accidental hand-off kilter in context in perspective of rundown. This report is proportional to fundamental cost or ricochet count of radiating the bundle on the most minor expensive or the first elliptic convenient course to the objective. Right once totally extraordinary floods of bundles are to cross the system, in any case, it'd beguile course a couple of groups on longer or only a great deal of extreme manners by which, if these manners by which ineluctably affect to affiliations that are less engorged. only a great deal of unambiguously, as noted in [6], [7], the leading prevailing plans in [1]– [5] will probably come through uncommon blockage and tremendous deferral (see the cases given in [6]). Obviously, it's appreciated that an adroit kind Of backpressure [8], contrasts backpressure dominating (DIVBAR) [7] guarantees certain predicted overall riches for all stabilizable segment charges. To certify yield optimality (restrained expected general abundance for all stabilizable touchdown charges), backpressure-primarily based estimations [7], [8] come via one element with the

Computer business organization on cloud platform

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Abstract. In 20th century, the era of digital marketing in engineering evolved rapidly, among those social networks, mobile terminology. Analytics and cloud computing makes vital functioning think technology. As per the latest surveys suggests that one among three is using the social networking. As coming to mobile technology, 19th century innovative invention is mobile machine and their equipment that are making major work in the human life. Such that the evaluation of this type of equipment is really make more sense. The change in business marketing the use thinks is cloud computing. It's making more interaction with the peoples. To making these type of cloud business make more profit to the vendor as well as the more useful to the consumer.

1. Introduction

The period of PC innovation is characterized as pre digitization, digitization and post digitization. The principle empowering innovation for Cloud Computing is Virtualization. Virtualization is a dividing of single physical server into various coherent servers. When the physical server is isolated, each sensible server carries on like a physical server and can run a working framework and applications freely. Numerous famous organizations resemble VMware and Microsoft give virtualization administrations, where as opposed to utilizing your own PC for capacity and calculation, you utilize their virtual server. They are quick, financially savvy and less tedious.

For programming engineers and analyzers virtualization comes extremely convenient, as it enables designer to compose code that keeps running in a wide range of situations and all the more imperatively to test that code.

Virtualization is chiefly utilized for three fundamental purposes: System Virtualization, Server Virtualization and Capacity Virtualization.

1.1 System virtualization

It is a technique for joining the accessible assets in a system by part up the accessible transfer speed into channels, every one of which is free from others and each channel is autonomous of others and can be appointed to a particular server or gadget progressively.

1.2 Server virtualization

Server virtualization is the covering of server assets like processors, RAM, working framework and so on, from server clients. The aim of server virtualization is to build the asset sharing and lessen the weight and intricacy of calculation from clients.

1.3 Capacity Virtualization

Identification of MITM Attack by Utilizing Artificial Intelligence Mechanism in Cloud Environments

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Abstract. Cloud dealing with has changed into an essential bit of the reliably life. It basically made everyone life less troublesome with astounding highlights. To help broadening many of clients and more over keen gadgets, it is depended upon to keep the cloud condition continuously secure and time tested. Scattered handling security has changed into a fundamental testing field at now a day. Here we introduced Man-made consciousness based structure that might be useful for an exposure of man-in-the-middle assault (MITM) in passed on figuring condition. As MITM strike winds up being eminent with the development of time, on the off chance that it is recognized at first, by then the assault might be limited. So we concentrated on assault region fragment to remain the cloud condition utilizing Man-made consciousness technique for thinking. Watchwords—Cloud enrolling condition, Computerized reasoning method of reasoning, MITM strike.

1.Introduction

Present world is honored with registering innovation. Allotted computing innovation has lined each substitute size inside the net centered often framework with its versatile and responsible highlights. At the same time now not the ascent of disbursed computing, it'll impossible to clutch fast net for the growing style of customers. Right now a day's increasing security has changed into a stimulating discovering out element for skilled companies. The bizarre attack goes on that harms each of the coins and beneficial time .On the off hazard that it can be miles abilities to moderate the attacks at intervals the cloud framework, at that trouble, the highest shoppers can respect the category of cost cloud situation all the greater consummately.

There square measure several varieties of assault, which would also ruin the cloud state of affairs interior a second if there's no watching forward to contraption. The utmost widely speak me well-known assault in cloud situation is MITM assault. This assault makes a specialty of the laptop going for walks in an exceedingly buildings administration framework and creates big large resolution of congestion. This congestion attacks the server's framework within cloud condition. All the cloud type servers that together rapidly get pressurized by it desires to method large form of interest. On the off threat that there is no opposing motion problem at intervals the cloud framework, at the moment, the parcel landing cost seems to be high with the growing of your time. Consequently, during one section, the clouds framework neglects to serve there shoppers.

We projected an AI covered, typically dilemma to apprehend the assault inside the cloud framework. We have a tendency to recognize AI framework is utilized to lessen the human ideas weight, since it's going to perform wise undertaking like human neural structure will do. Thus it is miles accomplishable to recognize the irregular behavior of parcels on the off probability that we tend to actualize the alternative intelligence reason inside the cloud framework. All of the approaching facts may also be sifted via the

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A new dynamic and enhanced resource allocation algorithm in cloud computing

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Abstract. One of the testing issues in Cloud data centers is to take the segment and relocation of reconfigurable virtual machines into thought and moreover the joined features of facilitating physical machines. We present a dynamic resource assignment framework (DRAM) for Cloud data centers. Dissimilar to customary stack balance arranging calculations which consider only a solitary factor, for instance, the CPU stack in physical servers, this strategy treats CPU, memory and framework information transmission composed for both physical machines and virtual machines. We create joined estimation for the all out irregularity dimension of a Cloud data center and furthermore the ordinary disproportion dimension of each server. Reproduction results show that DRAM has great execution as of indicate abnormality level, normal ponderousness dimension of each server, too as in general running time.

1. Introduction

Cloud computing creates as each other figuring perspective which hopes to give reliable, changed and QoS (Quality of Service) guaranteed registering dynamic conditions for end-customers [22].Distributed making prepared, paralliel adapting to and grid processing altogether ascended as distributed computing. The vital boundless of cloud computing is that customer measurements isn't put away provincially yet is secured inside the server homestead of net. The associations which give cloud computing organization could manage and keep up the assignment of these server ranches. The customers can get to the set away data at whatever point by using Application Programming Interface given by cloud providers entirely through any terminal apparatus related with web. Not solely are limit organizations gave yet what's more gear and programming organizations are open to the general populace and business markets.

The organizations given by utilizing authority associations can be the aggregate, since the system, stage or programming sources. Each such administration is in my view called Infrastructure as a Service, Platform as a Service. There are different conceivable outcomes of distributed computing, the great many people fundamental ones being lesser costs, re-provisioning of assets and way away receptiveness. Distributed computing cuts down cost by means of avoiding the essential utilization with the association in renting the material establishment from an untouchable provider.

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A comparative performance analysis of different machine learning techniques

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Abstract. Over the past many decades, Machine Learning (ML) has advanced from the undertaking of few PC fans misusing the likelihood of PCs figuring out how to play diversions, and a piece of Mathematics (Statistics) that only here and there measured computational methodologies, to an autonomous research obedience that has not just given the essential base to measurable computational standards of learning systems, yet in addition has created different calculations that are routinely utilized for content translation, design acknowledgment, and a numerous other business purposes and has prompted a different research enthusiasm for information mining to recognize shrouded regularities or abnormalities in social information that developing by second. This paper centers around clarifying the idea and development of Machine Learning, a portion of the well known Machine Learning calculations and endeavor to think about three most prevalent calculations dependent on some essential thoughts. Sentiment140dataset was utilized and execution of every calculation as far as preparing time, forecast time and precision of expectation have been reported and analyzed.

1. Introduction

Because of innovative enhancements and development, a monstrous measure of information is produced in an extensive variety of fields like bioinformatics, human services, web based life, training, back et cetera. Consequently an expanding volume of information, accessibility of various classes of information and improving computational preparing have made machine learning (ML) – an essential angle in the field of artificial intelligence (AI). ML is the most vital information examination techniques which iteratively gain from the accessible information by utilizing calculations. ML takes after iterative attributes, since the models are permitted to acknowledge the new information. ML strategies build up a model from the given data sources. From the models, a huge forecasts and choices might be gotten. Hence, ML systems allow the PCs to gain from the given information and develop a model to anticipate the future information. The point of ML methods is to improve the learning capability of PCs. ML procedures assume a crucial job in numerous applications in the fields of internet based life, training, back, bioinformatics, medicinal services, vitality holds, and climate forecast et cetera. The four ML calculations like irregular woods, neural networks (NNs), found the middle value of NNs and bolster vector machine (SVM) for precipitation territory recognition and precipitation rate task[4]. The NNs and arrived at the midpoint of NNs were distinguished as the most reasonable calculations in light of

Enhanced path recreation in remote sensor networks

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Abstract: The remote specially appointed systems comprise of a gathering of remote hubs that impart over a typical remote medium. The hubs impart without a framework, for example, base station, wired passage, and so forth. The foundation of the systems must be in an appropriated and decentralized way. In this manner, the many-sided quality of the systems is in the hubs self. The hubs must have the capacity to take care of system's concern, for example, directing and security. Regardless of the specialized difficulties, the interests of the impromptu systems increment quickly as of late, in light of the fact that they bolster portability and are exceptionally appropriate for some troublesome circumstances, such protect mission, military, vehicular interchanges, and so forth. In this review article, I present the idea of remote impromptu systems and uncommonly portable specially appointed system (MANET), their engineering, purposes, applications, preferences, burdens, and correlation with framework systems.

1. Introduction

Remote specially appointed systems are accumulations of remote hubs that convey straightforwardly over a typical remote channel. The hubs are outfitted with remote handset. They needn't bother with any extra foundation, for example, base station or wired passage, and so on. Consequently, every hub doesn't just assume the job of an end framework, yet in addition goes about as a switch, that sends parcels to wanted hubs.

The impromptu are relied upon to do assignments, which the framework can't do. Impromptu systems are for the most part utilized by military, save mission group, cab driver. Their works can't depend on a framework's system. As an illustrative precedent, envision fire-fighters put out dangerous fire in major woodland. They need to impart one another; however building up a foundation or cabling in such region is unthinkable or excessively costly.

The primary issues in specially appointed systems are steering and normal for remote correspondence. In foundation's systems a hub can speak with all hubs in a similar cell. In impromptu a hub can discuss just with hubs in its territory. this hub can speak with different hubs, yet a directing calculation is fundamental. Not at all like wired correspondence, have remote systems had transmission issue with information trans-mission, for example, probability of hilter kilter associations and higher obstructions. The point of this review article is to give information's on impromptu systems and uncommonly MANET, their structure, their applications on the present time, and also their solid and shortcoming in examination with framework systems. Area 2 presents specially appointee's engineering and its

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An ensemble integrated mailing system for detecting spam mails

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Abstract. In Internet, today most widely issues occur with security. Security plays the vital role in Internet. Many software and hardware systems are affecting with the security issues. This may cause major problem for the companies to maintain the network securely. Attackers mainly concentrate on attacking the servers and systems with any type of malware and virus to hack the system or mail account. Today the most popular attacking by the attackers are spam mails. This brings lot of security issues if it is implemented in gmail, yahoo and other mail service providers. Spam zombies are the spam activities done by the spam developers to attack the system. In this paper, an ensemble spam mail detection system named ESMDS by observing outgoing and incoming messages of a network. ESMDS is developed based on a powerful analysis tool called Sequential Probability Ratio Test (SPRT). Results show the performance of the ESMDS.

1. Introduction

Recent years a mail plays the major role for sending and receiving the messages and also attached with the files. Spam is rehearsing in inutility, storage and similarity knowledge transfer capability. The problem of spam email has been increasing for a substantial length of your time. In in progress insights, four-hundredth of all messages square measure spam that around fifteen.4 billion email for every day which price internet purchasers regarding $355 million per annum. Programmed email separating is evidently the slightest complex framework for countering spam straight away and a decent group action among spammers and spam-sifting methods goes on. Simply quite a whereas back the bulk of the spam may well be faithfully managed by interference messages originating from specific locations or separation through messages with sure titles. Spammers began to use a couple of precarious methods to overcome the separation methods like using sporadic sender tends to even now as attach incautious characters to the start or the finish of the message title [11].

Data coming up with and machine learning square measure the 2 general methodologies used in email separating. In data coming up with methodology a meeting of tenets should be determined by that messages square measure sorted. Implementing this strategy, no encouraging outcomes demonstrate in lightweight of the actual fact that the principles should be perpetually invigorated and preserved or, in alternative words of your time and it's not advantageous for usual, purchasers. ML method is improved than associate data building method; it does not need decisive any tenets [4]. Rather, a meeting of making ready tests, these examples are a meeting of pre-grouped email messages. A specific algorithm is then wont to absorb the arrangement rules from these email messages. Machine learning approach has been usually thought of and there square measure various calculations will be used in email separating. They

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Deep learning: a branch of machine learning

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Abstract. Deep learning is a rising territory of machine learning (ML) inquire about. It includes different shrouded layers of artificial neural systems. Deep learning (DL) is a part of machine learning dependent on an arrangement of algorithm that aim to show abnormal state reflections in information. It is utilized by Google in its voice and picture recognition algorithm, by Netflix and Amazon to choose what you need to watch or purchase straightaway, and by specialists at MIT to anticipate what's to come. Deep Learning is utilized in different fields for accomplishing various levels of deliberation like sound, content, pictures highlight extraction and so forth. The Deep learning philosophy applies nonlinear changes and model reflections of abnormal state in extensive databases. With Deep learning capacity to make forecasts and groupings taking the upside of huge information, it can be a creative answer for issues and issues that have been never thought to be understood in such a simple way. Then again, it makes numerous difficulties on the researchers who are trying to convey such another methodology. The accompanying survey sequentially shows how and in what real applications deep learning algorithms have been used. We have completed a broad writing survey and reviewed the utilization of deep learning in different fields.

1. Introduction

The execution of machine learning techniques is vigorously reliant on the selection of information portrayal on which they are connected [1]. Therefore, a great part of the genuine exertion in sending machine learning algorithms [2] goes into the structure of preprocessing pipelines and information changes that outcome in a portrayal of the information that can bolster powerful machine learning. Such component designing is imperative yet work concentrated and features the shortcoming of deep learning algorithm: their failure to separate and sort out the discriminative data from the information. Highlight designing [4] is an approach to exploit human resourcefulness and earlier information to make up for that shortcoming. The most exemplary subdivision inside NLP is machine interpretation, or, in other words the interpretation between dialects. Machine interpretation algorithm have brought about different applications that consider syntax structure and spelling botches. Also, an arrangement of words and vocabulary identified with the primary theme is consequently utilized as the principle source when the system is proposing changes to essayist or manager [3]. With the end goal to grow the extension and simplicity of materialness of machine learning, it would be very attractive to make learning algorithm less subject to highlight designing, so novel applications could be developed quicker, and all the more essentially, to gain ground towards Artificial Intelligence (AI). Measurable bends can depict past, and present with the end goal to foresee future practices. In any case, amid the most recent decades just great methods and algorithm have been utilized to process this information, while an enhancement of those algorithms could lead on a viable self– learning. A superior basic leadership can be actualized dependent on existing qualities, numerous criteria and insights propelled techniques.

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Deep learning: a branch of machine learning

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Abstract. Deep learning is a rising territory of machine learning (ML) inquire about. It includes different shrouded layers of artificial neural systems. Deep learning (DL) is a part of machine learning dependent on an arrangement of algorithm that aim to show abnormal state reflections in information. It is utilized by Google in its voice and picture recognition algorithm, by Netflix and Amazon to choose what you need to watch or purchase straightaway, and by specialists at MIT to anticipate what's to come. Deep Learning is utilized in different fields for accomplishing various levels of deliberation like sound, content, pictures highlight extraction and so forth. The Deep learning philosophy applies nonlinear changes and model reflections of abnormal state in extensive databases. With Deep learning capacity to make forecasts and groupings taking the upside of huge information, it can be a creative answer for issues and issues that have been never thought to be understood in such a simple way. Then again, it makes numerous difficulties on the researchers who are trying to convey such another methodology. The accompanying survey sequentially shows how and in what real applications deep learning algorithms have been used. We have completed a broad writing survey and reviewed the utilization of deep learning in different fields.

1. Introduction

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Ensemble path finding in wireless sensor networks

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Abstract: A wireless sensor network (WSN) plays the major role in providing the network for the various scenarios. It consists of various nodes and base stations that are used to communicate the nodes and transfer the data from source to destination and in between the nodes. The important parameters of the WSN are accuracy, computation time and shortest path between the nodes. Various existing approaches are available to get the results. But the existing approaches are not performed well. In this paper, the ensemble path finding is implemented to solve issues identified in the existing system. The proposed system shows the performance based on accuracy, computation time and shortest dynamic path.

1. Introduction

The utilization of WSNs for info correspondence and handling is developing quickly. A framework of WSNs relies on an intensive range of free sensor hubs and a base station, with the bottom station going concerning as a portal to a different system. A sink node often serves the duty of the base station; this might be a digital computer or a computer framework that gathers information and examinations it to decide on fitting selections [1]. Various types of sensor nodes will frame a WSN, as well as low examining rate enticing, warm, visual, infrared and acoustic [1]. The sensor on each node will acknowledge wonders, as an example, light, weight, warm, so forth [2]. The sensor is outfitted with a bit battery as an influence provides, which suggests that the system execution is extremely dependent on the speed of energy utilization.

With the continuing accomplishment within the field of sensors, the constant application has inflated clear thought among technocrats and scientists. With the top goal to kill the difficulties of the sensors, technologists and scientists found a solution by conveyance the continuing utilizations of Wireless sensor network (WSN). The constant sensors can momentarily notice, record, and send criticism to the top shopper for more making ready of the got information. Above all, the continual application is disturbed concerning the execution of basic applications that require restricted defer dormancy. Current remote correspondence could be a rising application field of WSNs that includes a potential noteworthy analysis course. Current applications able to screen, react promptly to shopper info, or management Associate in Nursing outer scenario. The outer condition is related to the computer framework through sensors, actuators, and knowledge yield gadgets. Remote device organizes that empower the system restricted defer guarantee, or, in alternative words the conclusion to finish bundle conveyance, the square measure named as constant WSN [1]

Re-design of smart homes with digital twins

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Abstract. One of the key transformations in the epoch of the Internet of Things(IoT) and industry innovation is Digital twin. The top trending technologies like Machine learning, artificial intelligence, Cloud Computing platforms, Big data architectures, Software analytics and the Internet of things(IoT) are integrated and used by a digital twin concept in an immense way which changes the IT business productivity and reduces the cost of investment. Digital Twin is a flourishing tool which integrates the both physical and virtual scenarios/worlds. This paper presents the re-designing solution for Smart homes using the digital twin paradigm. The introduction and the concept of this technology are introduced first, and then presented a sophisticated smart home architecture with digital twin. At last we performed experiments on this digital twin architecture and compared with normal IoT implementations. In this Whitepaper, we reviewed the concepts of Digital twin technology, IoT and re-designing idea for building Smart Homes.

1. Introduction

With the mounting deployments of the Internet of Things (IoT) systems, the significance of the concept of a digital illustration of physical things has gathered trivial interest in the recent years [2]. Digital Twin is basically a living model of the physical skill or system, which will repeatedly adapt to changes in the milieu or operations and bring the best business outcome. It can also be rapidly, quickly and easily scaled for quick deployment for the other, similar applications. Building a smart building is often an essence for deploying all the sensors, software, network, and physical assets [5]. The data collected and analysis results are shared to the digital twin and can be monitored by an individual. The most outstanding example of this trend can be found in the Gartner's report titled "Top 10 Strategic Trends for 2017" published in October 2016, Digital Twins was Number 5 strategic trend for 2017 in this report [6][7]. These digital proxies are expected to be built from the domain knowledge of subject matter experts as well as the real-time data collected from the devices [1].

"Digital twin is the skill to craft a virtual depiction of the physical elements and the dynamics of how an Internet of Things device operates works and device act in response right through its lifecycle." The source of the term "Digital Twin" was used by Dr. Michael Grieves at the University of Michigan, USA around 2001-2002. He initially defined this in the milieu Lifecycle Management of product. He initiates the idea of a "Digital Twin" as a virtual representation of manufactured object. He widen the design of comparing and contracting a Digital Twin to its engineering design to better realize what was produced versus what was designed. Likewise tightening the gap between design and execution [3][4]. Gartner predicts that by 2021, "55 % of huge industrial organizations will use digital twins, ensuing in those companies gaining 15 percent perfection in effectiveness." So, while digital twin technology isn't

Computer business organization on cloud platform

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Abstract. In 20th century, the era of digital marketing in engineering evolved rapidly, among those social networks, mobile terminology. Analytics and cloud computing makes vital functioning think technology. As per the latest surveys suggests that one among three is using the social networking. As coming to mobile technology, 19th century innovative invention is mobile machine and their equipment that are making major work in the human life. Such that the evaluation of this type of equipment is really make more sense. The change in business marketing the use thinks is cloud computing. It's making more interaction with the peoples. To making these type of cloud business make more profit to the vendor as well as the more useful to the consumer.

1. Introduction

The period of PC innovation is characterized as pre digitization, digitization and post digitization. The principle empowering innovation for Cloud Computing is Virtualization. Virtualization is a dividing of single physical server into various coherent servers. When the physical server is isolated, each sensible server carries on like a physical server and can run a working framework and applications freely. Numerous famous organizations resemble VMware and Microsoft give virtualization administrations, where as opposed to utilizing your own PC for capacity and calculation, you utilize their virtual server. They are quick, financially savvy and less tedious.

For programming engineers and analyzers virtualization comes extremely convenient, as it enables designer to compose code that keeps running in a wide range of situations and all the more imperatively to test that code.

Virtualization is chiefly utilized for three fundamental purposes: System Virtualization, Server Virtualization and Capacity Virtualization.

1.1 System virtualization

It is a technique for joining the accessible assets in a system by part up the accessible transfer speed into channels, every one of which is free from others and each channel is autonomous of others and can be appointed to a particular server or gadget progressively.

1.2 Server virtualization

Server virtualization is the covering of server assets like processors, RAM, working framework and so on, from server clients. The aim of server virtualization is to build the asset sharing and lessen the weight and intricacy of calculation from clients.

1.3 Capacity Virtualization

Identification of MITM Attack by Utilizing Artificial Intelligence Mechanism in Cloud Environments

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Abstract. Cloud dealing with has changed into an essential bit of the reliably life. It basically made everyone life less troublesome with astounding highlights. To help broadening many of clients and more over keen gadgets, it is depended upon to keep the cloud condition continuously secure and time tested. Scattered handling security has changed into a fundamental testing field at now a day. Here we introduced Man-made consciousness based structure that might be useful for an exposure of man-in-the-middle assault (MITM) in passed on figuring condition. As MITM strike winds up being eminent with the development of time, on the off chance that it is recognized at first, by then the assault might be limited. So we concentrated on assault region fragment to remain the cloud condition utilizing Man-made consciousness technique for thinking. Watchwords—Cloud enrolling condition, Computerized reasoning method of reasoning, MITM strike.

1.Introduction

Present world is honored with registering innovation. Allotted computing innovation has lined each substitute size inside the net centered often framework with its versatile and responsible highlights. At the same time now not the ascent of disbursed computing, it'll impossible to clutch fast net for the growing style of customers. Right now a day's increasing security has changed into a stimulating discovering out element for skilled companies. The bizarre attack goes on that harms each of the coins and beneficial time .On the off hazard that it can be miles abilities to moderate the attacks at intervals the cloud framework, at that trouble, the highest shoppers can respect the category of cost cloud situation all the greater consummately.

There square measure several varieties of assault, which would also ruin the cloud state of affairs interior a second if there's no watching forward to contraption. The utmost widely speak me well-known assault in cloud situation is MITM assault. This assault makes a specialty of the laptop going for walks in an exceedingly buildings administration framework and creates big large resolution of congestion. This congestion attacks the server's framework within cloud condition. All the cloud type servers that together rapidly get pressurized by it desires to method large form of interest. On the off threat that there is no opposing motion problem at intervals the cloud framework, at the moment, the parcel landing cost seems to be high with the growing of your time. Consequently, during one section, the clouds framework neglects to serve there shoppers.

We projected an AI covered, typically dilemma to apprehend the assault inside the cloud framework. We have a tendency to recognize AI framework is utilized to lessen the human ideas weight, since it's going to perform wise undertaking like human neural structure will do. Thus it is miles accomplishable to recognize the irregular behavior of parcels on the off probability that we tend to actualize the alternative intelligence reason inside the cloud framework. All of the approaching facts may also be sifted via the

Design of Gregorian Reflector for Imaging

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Abstract:A Gregorian Dual Reflector configuration is proposed to scan an area ranging from -1.2° to 1.2°. The proposed configuration consists of a paraboloidal main reflector, ell... **View more**

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Abstract:
A Gregorian Dual Reflector configuration is proposed to scan an area ranging from -1.2° to 1.2°. The proposed configuration consists of a paraboloidal main reflector, elliptical sub-reflector operating at Ku-Band and sharing common feed point. Imaging arrangement is obtained by translation, rotation and focal length adjustment of the feed. An attractive feature of the imaging arrangement is that they are capable to scan one beam electronically and generate multi beam coverage in a limited field of view. As an application, a 0.6m diameter main reflector with a cluster of WR-51 waveguides is utilized to get an H.P.B.W of 1.8°.

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Contents

I. Introduction

Reflector antennas with limited electronic scanning are of interest in communication and satellite applications. The imaging system, also known as magnified array consists of a feeding phased array properly magnified by usually two reflector surfaces. The most typical imaging reflector systems are constituted by a phased array and two conformal parabolic reflectors in a Gregorian configuration.