



# **International Conference on Computing Communication and Electrical Technologies**

**Hyderabad, Telangana  
29<sup>th</sup> & 30<sup>th</sup> August, 2019**

Organized by:

**G Narayanamma Institute of Technology & Science for Women  
(Autonomous) [GNITS]**

**&**

**Institute For Engineering Research and Publication [IFERP]**





## **Rudra Bhanu Satpathy,**

Chief Executive Officer

Institute For Engineering Research and Publication.

On behalf of *Institute For Engineering Research and Publications (IFERP)* and in association with *G Narayanamma Institute of Technology & Science for Women*, Hyderabad, Telangana. I am delighted to welcome all the delegates and participants around the globe to *G Narayanamma Institute of Technology & Science for Women, Hyderabad, Telangana* for the “*International Conference on Science Engineering and Technology (ICCCET -2019)*” Which will take place from *29<sup>th</sup> - 30<sup>th</sup> August'19*

Transforming the importance of Engineering, the theme of this conference is “*International Conference on Computing Communication and Electrical Technologies (ICCCET-2019)*”

It will be a great pleasure to join with Engineers, Research Scholars, academicians and students all around the globe. You are invited to be stimulated and enriched by the latest in engineering research and development while delving into presentations surrounding transformative advances provided by a variety of disciplines.

I congratulate the reviewing committee, coordinator (**IFERP & GNITS**) and all the people involved for their efforts in organizing the event and successfully conducting the International Conference and wish all the delegates and participants a very pleasant stay at *Hyderabad, Telangana*

Sincerely,

**Rudra Bhanu Satpathy**



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## Preface

The “*International Conference on Computing Communication and Electrical Technologies (ICCCET-2019)*” is being organized by *G Narayanamma Institute of Technology & Science for Women*, Hyderabad, Telangana in association with *IFERP-Institute for Engineering Research and Publications* on the 29<sup>th</sup> – 30<sup>th</sup> August, 2019.

*G Narayanamma Institute of Technology & Science for Women* has a sprawling student – friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the major city of Hyderabad in Telangana.

The “*International Conference on Computing Communication and Electrical Technologies*” was a notable event which brings academia, researchers, engineers, industry experts and students together.

The purpose of this conference is to discuss applications and development in area of “**Computing Communication and Electrical Technologies**” which were given international values by *Institute for Engineering Research and Publication (IFERP)*.

The International Conference attracted over 296 submissions. Through rigorous peer reviews 136 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

We are indebted to the efforts of all the reviewers who undoubtedly have raised the quality of the proceedings. We are earnestly thankful to all the authors who have contributed their research works to the conference. We thank our Management for their wholehearted support and encouragement. We thank our Principal for his continuous guidance. We are also thankful for the cooperative advice from our advisory Chairs and Co-Chairs. We thank all the members of our local organizing Committee, National and International Advisory Committees.

**ICCCET-2019**

## Message from Chairman



**Sri.P.Subba Reddy**

Hon'ble Chairman

GNITS, Hyderabad,Telangana

On I am honored to welcome all the delegates to the International Conference on Computing, Communication & Electrical technologies-2019 (ICCCET-2019) to be held on 29<sup>th</sup> and 30<sup>th</sup> August 2019. Over the past two decades G. Narayanamma Institute of Technology and Science (GNITS) has evolved to be a best destination for the finest quality education with its state of art infrastructure and excellent human resources for engineering education.

GNITS takes keen interest in updating its infrastructure that stimulates intellectual thinking and academic interaction to meet the technological revolution and new challenges of modern era. In GNITS students are given support and encouragement to take up the internships and training programmes offered by the companies and project works in collaboration with the expertise provided by the corporate and industries.

The aim of the conference is to provide a common platform to researchers, industry personal, academicians and participating professionals to interact and discuss about the advances made in the areas of Computing, Communication & Electrical Technologies. Scientific advancements must yield benefits for the peaceful coexistence , progress , prosperity and welfare of people everywhere .This type of conference not only brings all the researchers and students at one platform, but it also inculcates the research culture among the entire fraternity of education, there by contributing to the development of society.

I hope that through this conference, the participants will have a fruitful discussion and come out with innovative ideas to bring advances in the field of Computing, Communication & Electrical technologies under the aegis of GNITS.

Best wishes

Sri. P. Subba Reddy

## **Message from Vice-Chairman**



**Smt.G.Srividya Reddy**

Jt.Secretary

GNITS, Hyderabad, Telangana

I am extremely delighted to welcome all the delegates to the international conference on Computing, Communication & Electrical technologies-2019 (ICCCET-2019) to be held on 29<sup>th</sup> & 30<sup>th</sup> Aug 2019 at G. Narayanamma institute of technology (GNITS). This conference aims to highlight the recent research outcomes in the field of Computing, Communication & Electrical technologies.

Technocrats are the key to continued economic and technological advancements of our country. The rapid rate of technological advancements and information revolution has opened new series of challenges as well as opportunities. Today, the society, the academia & the industry need to stand together and share their commitment, enthusiasm, and expertise in order to create a responsible, progressive and skilled citizenry. GNITS has thrived and advanced in the field of Women empowerment through engineering education and has carved a name for itself. Utilization of the talents of women should not be viewed only from the perspective of gender equality. It must be understood that full involvement of women in scientific and technological efforts is today essential for rapid economic development and sustainable happiness.

It is my great pleasure to wish all the delegates for considerable achievements in their pursuits in respective fields. Collectively all our efforts should make the society to progress with prosperity and peace for everyone. I have great confidence in stating that, this conference will certainly be a step towards that objective.

In this connection I convey my best wishes to the organizing committee for their laudable effort and also wish them grand success in conducting event.

Wish best wishes,

G.Srividya Reddy

## Message from Principal



**Dr.K.Ramesh Reddy**

Principal

GNITS, Hyderabad, Telangana

On behalf of organizing committee, it is my great privilege to welcome you to the ICCCET-19 to be held on 29th & 30th August 2019 at G. Narayanamma Institute of Technology & Science GNITS (Autonomous). The aim of ICCCET-19 is to bring together Researchers, scientists, Engineers, Scholars and students in the areas of computing, communication and electrical engineering to exchange ideas and presenting their research works. In addition it is a venue for interaction and to establish all important contacts with each other. ICCCET-19 is a multi disciplinary peer reviewed international conference on computing, communication and electrical engineering that provides a forum for exchange of latest technological information.

We all understand the need to rejuvenate ourselves to further expand our frontiers in facilitating quality education for research community, particularly growing young generation to enhance technical understanding of current scenario.

The various thematic sessions will showcase important technological advances and highlight their significance and challenges in a world of fast changes. I hope the delegates will have a great experience while attending the plenary sessions and oral presentations and will get an opportunity to interact with the conference participants. This conference will definitely enrich your innovative and research ideas.

I congratulate all the participants for having their research articles presented at ICCCET-2019 and sharing a most pleasant, interesting and fruitful conference.

With best wishes,

Dr.K.Ramesh Reddy

## Message from Convener



**Dr.K.Rama Linga Reddy**

Professor & HOD Of ETE

GNITS, Hyderabad, Telangana

On behalf of the Conference board I would like to welcome all the delegates to ICCCET-2019.

The overwhelming response to ICCCET-2019 indicates the importance of this conference and confirms that ICCCET-2019 will become the good platform for discussing latest technological trends and development in the field of Computing, Communication, Electrical and Electronics related topics. In the recent past, as data transmission rates have been increased tremendously at reasonable price, the current society witnessed the tremendous growth of ICT in past few years. Therefore, every sub domain of ICT is infested with some issues which need to be resolved for the betterment of society. There are many challenges associated with various segments of communication technologies, security issues in networks, cost minimization issues in high performance computing, energy minimization issues in IoT etc.

The ICCCET-2019 will facilitate the young researchers, industries and research organizations especially, those, who are carrying out their research work in the aforesaid domain of Computer Science, Information Technology, Electrical, Electronics and Communication Engineering with valuable discussions in order to make the outcomes more realistic.

The main objective of ICCCET-2019 is to provide an apt platform where awareness about novel researches can be disseminated, scope for further research can be investigated and challenges can be discussed. The delegates with high academic pursuits will join and share their experiences, views for coping up with the recent challenges. This prestigious conference is organized by G. Narayanamma Institute of Technology & Science (For Women) (Autonomous) in association with IFERP. The conference itself starts with the plenary session on 29th August 2019, where keynote speeches will be given by distinguished experts. I am happy to say that the outcome of this two day Conference is brought out in the form of proceedings. I would like to express my thanks to IFERP for their outstanding Support and association with us in constituting the Technical Program Committee with distinguished



experts as members and the competent evaluation of the large number of submissions. All selected papers received by the deadline have been included in the conference proceedings and best quality papers will be published in Scopus Indexed Journals. Key note lectures by experts in various fields will inspire the researchers and provide an exposure to various aspects and an opportunity for discussions with distinguished experts.

On behalf of organizing team, I am thankful to our Management, Principal and Steering Committee Chair, Co-Conveners and other Committee members for their extensive support and guidance to organize ICCCET-2019 successfully. I wish all the participants to have a successful and rewarding experience from ICCCET-2019.

With best wishes

Dr.K.Rama Linga Reddy



**ICCCET-2019**

*International Conference on Computing  
Communication and Electrical Technologies*

**Keynote Speakers**





## **Dr. Mohammad Tariqul Islam**

Professor, Department of Electrical, Electronic and Systems Engineering,  
Universiti Kebangsaan Malaysia.

Visiting Professor, Kyushu Institute of Technology, Japan.

### **MESSAGE**

It is an immense pleasure for me to be part of the International Conference on Computing Communication and Electrical Technologies (ICCCET-2019). I humbly convey my compliments to the G.Narayanamma Institute of Technology and Science (for Women), and the Institute For Engineering Research and Publication (IFERP) and other stakeholders for organizing this conference. I wish a very successful completion of this 2-day long conference with excellent sharing of knowledge among all participants. This conference will give chance to all students/research scholars/delegates/experts/presenters/keynote speakers from different fields to exchange new knowledge and ideas on the recent challenges in engineering technologies.

This conference is being organized to present, share and discuss recent innovations and breakthroughs in the fields of Computer Science and Engineering, Electronics and Communication Engineering and Electrical and Electronic Engineering, which are the recent trends in this on-growing modern world. For the sustainable development and green persistence of the world, research and development should be an inevitable part of our society, where people will explore different technical fields, like the fields chosen for this conference. I believe, it will bring all the policymakers, inventors, stakeholders, and above all, the researchers to exchange their recent findings and help to contribute to the betterment of this society and the world. I hope that this conference will address all the problems, ways of solutions, and the understanding of the issues in the fields chosen for it and above all fulfill the aim of the organizers.

I extend my warm greetings to all the participants and best wishes for the grand success of this Conference.

A handwritten signature in black ink, appearing to read 'Tariqul'.

Mohammad Tariqul Islam



**Sanjay Hotwani**

Data Scientist in British Telecom  
(A UK Based Company)  
Bangalore

***BIOGRAPHY:***

Lead Data Scientist in British Telecom (A UK Based Company) with an Overall IT Experience of 14 years. Technology Enthusiast, Everyday Learner and Interested in Knowing and learning new cutting-edge technologies. Responsibilities include Architecture, Design and Development of Applications and Skilled in Machine learning, Deep learning, Statistics, Problem solving and Programming. Hobbies include Playing Cricket, Chess, Badminton and Participation in Data Science Competitions. Member of Toastmasters Club. Created Voice Bot integrated with Mobile App for BT Bangalore Employees as part of Smart Office Theme.

# ICCCET-2019

## *International Conference on Computing Communication and Electrical Technologies*

*Hyderabad, Telangana, 29<sup>th</sup> - 30<sup>th</sup> August , 2019*

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**ABSTRACTS**

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*and*  
**Institute For Engineering Research and Publication (IFERP)**



## **IOT Based Vehicle Tracking and Monitoring System Using GPS and GSM**

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***Abstract:--***

One of the most important application of IoT is vehicle tracking system. The system which is used to track the vehicle position can be used in many applications such as security of personal vehicles, transportation systems, school buses/cars, fleet management and others. Tracking system is designed to know the position of the lost vehicle. This system is designed by using Global System for Mobile Communication and Global Positioning System to locate the vehicle position easily. GPS module is used to determine the location of the lost vehicle in the form of latitude and longitude values. These values are transmitted to the user mobile phone by using GSM modem through mobile network. Alcohol sensor and accident detection sensors are used to identify the accident and to pass that information in the form of short messages to the user using GSM modem. Sensor values can be monitored by anyone from anywhere in the world using thingspeak channel. RFID technology is used to provide security to the vehicle tracking system. by using a ignition key theft is detected and GSM mobile app is used to control the vehicle remotely.

***Keywords:-***

Arduino, GPS, GSM, IoT,MQ3, RFID, Thingspeak.

## **An Efficient Framework for Secure Query Search to Verify Consequences by Using Verification Object**

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**CH.Sravanthi**, Assistant Professor,Department of Information Technology, G .Narayanamma Institute of Technology and Science for women , Hyderabad, Telangana.

### ***Abstract:--***

protect search for strategies more encrypted cloud information permit an authorized character to query facts documents of hobby with the aid of submitting encrypted query key phrases to the cloud server in a privacy-preserving manner. However, in workout, the lower back query outcomes may also be wrong or incomplete inside the dishonest cloud environment. For instance, the cloud server may additionally intentionally omit some certified outcomes to save computational sources and verbal exchange overhead. Thus, a well-functioning at ease question device need to offer a question outcomes verification mechanism that allows the records person to verify consequences. In this paper, we layout a safe, without issues blanketed, and first-rate-grained question effects verification mechanism, with the useful resource of which, given an encrypted question outcomes set, the query client now not simplest can verify the correctness of every data record within the set however also can further check what number of or which licensed statistics files aren't again if the set is incomplete in advance than decryption. The verification method is loose-coupling to concrete secure searching for strategies and may be very without troubles included into any secure question method. We accumulate the reason through building comfortable verification object for encrypted cloud information. Furthermore, a brief signature technique with noticeably low storage charge is proposed to assure the authenticity of verification item and a verification object request method is provided to permit the question purchaser to soundly gain the favored verification item. Performance evaluation indicates that the proposed methods are sensible and inexperienced.

### ***Keywords:***

Bloom Filter, Paillier Encryption,Verification Mechanism,Confidentiality



## **Lung Cancer Detection from Computed Topography Images using Marker controlled Watershed**

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**Ch.Usha Kumari**, Department of ECE, GRIET, Hyderabad, India

**Swapna Raghunath**, Department of ECE, GNITS, Hyderabad, India

**Tejashwini Neela**, Department of ECE, GRIET, Hyderabad, India

### ***Abstract:--***

The death count due to lung cancer is increasing day by day. According to world health organization (WHO) statistics, the estimated deaths are around 2,28,150 (116,440 in men and 111,710 in women). The statistics shows the lung cancer consists of about 14 percent among other cancers. It ranks second place in each woman and men. This research is carried out using lung CT (Computer Topography) images. In this paper, the proposed method is carried in three stages. In stage one, preprocessing is done using gaussian filter and Gabor filter. The image smoothing is accomplished with gaussian filter and image enhancement is done using Gabor filter. In stage two, image segmentation is done using marker-controlled watershed algorithm it segments the lung portion only. In stage three, binarization is used for detection and classification is carried out based on the black and white pixels. In the binarization method, if black pixel count is less than 17179, then lung cancer is detected. The adopted Navies Bayes classifier shows an accuracy of 94.6 percent. Gabor filter gives best in terms of texture analysis and intensity when compare with a gaussian filter. Gabor filter increases the contrast in nodule areas that are very helpful for cancer detection.

### ***Keywords:--***

Binarization, CT images, Gaussian Filter, Gabor Filter, Marker controlled watershed.

## MDBR algorithm for Routing as well as Load balancing with link failures on grid topology

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**T.Bhaskar Reddy**, Professor CS&T dept, Sri KrishnaDevaraya University, Ananthapur, A .P, India

### **Abstract:--**

Routing algorithm is very crucial in choosing, appropriate path to transfer the data packets from desired source to destination. Handling the congestion is one more challenge faced while routing the data packets. Even though there are ample number of routing protocols for choosing shortest paths and increase final throughput of existing network, in this paper we are going to discuss a protocol which not only transmits data using shortest paths but also balances the nodes on the routed path in order to face the congestion challenge, which named as Modified Depth breadth routing (MDBR) algorithms. Usually performance is measured as bits which are delivered in specific time I.e. throughput along with total data packets successfully transmitted to the destination. Here we considered performance measure as sum of costs between edges involved in routing. while data transmission if it suffers with congestion, Proposed mechanism traces areas with congestion on the network later it distributes the data from congested node with a check of incoming data flow and outgoing data flow of network traffic in form of packets and excess traffic is being diverted to other nodes which are participating in forming shorter paths and performance of proposed protocol is analyzed when there happens different failure of wires on network.

### **Key words -**

congestion control; balancing of Load; load balancing concept; distribution of traffic ; failure of wires;

## Matrix Factorization within DBMS

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### **Abstract:--**

High-dimensional data analysis is quite inevitable due to emerging technologies in various domains. To perform analysis on these high dimensional data, there are several platforms like Apache Hadoop, Cassandra, MongoDB, etc where the data is extracted out of the DBMS, analysed and then put it back into the database. Shortcomings of this approach are decreased performance in terms of retrieval time and re-storage of data. Frequent and dynamic data update becomes very challenging as the data is increasing rapidly and security challenges such as loss of information, corruption of data, etc. also exist. Hence this paper proposes CUR matrix factorization technique within DBMS using SQL queries for efficient way of organizing the data. A comparative analysis of execution time of the proposed approach using SQL with external analytics as well as User Defined Functions within DBMS using python language reveals the efficacy of our proposed approach.

### **Index Terms**

Matrix Factorization, DBMS, CUR, SQL, Python-connectivity, PL Python.

## Retail Giant Sales Forecasting Using Machine Learning

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**Vijaykumar. B**, Information technology, G. Narayanamma Institute of Technology and Science, Hyderabad, India.

**Abstract:--**

Sales forecasting is widely recognized and plays a major role in an organization's decision making. It is an integral part in business execution of retail giants, so that they can change their strategy to improve sales in the near future. This helps in better management of their resources like machine, money and manpower. Forecasting the sales will help in managing the revenue and inventory accordingly. This paper proposes a model that can forecast most profitable segments at granular level. As most retail giants have many branches in different locations, consolidation of sales are hard using data mining. Instead using machine learning model helps in getting reliable and accurate results. This paper helps in understanding the sales trend to monitor or predict future applicable on different types of sales patterns and products to produce accurate prediction results.

**Keywords:**

Machine Learning, ARIMA, sale-forecasting, smoothing COV and classical decomposition.

## A Deep Learning Approach for the Generation of Textual Story Corresponding to a Sequence of Images

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**Nagaratna P Hegde**, Professor at Vasavi College Of Engineering, Hyderabad, India

**Nenavath Venkatesh Naik**, UG Scholar, Department Of Computer Science & Engineering, RGUKT Basar, India

**Allu Siva Kishore Reddy**, UG Scholar, Department Of Computer Science & Engineering, RGUKT Basar, India

### **Abstract:--**

Generating a short story for a sequence of images is much more interesting than generating a single line textual description for an image. Story generation involves relating the meaning of the previous image and the current image and continuing this through out the sequence of images. This can be helpful for better understanding of the situation. In this paper we present our idea of generating story using a CNN model which is pre trained on MSCOCO dataset that can detect objects and concepts of language modelling and NLP text pre-processing techniques . We used a custom stories dataset in which we manually labelled every sentence in every story. Number of sentences in the generated story is equal to the number of images. The results are quite accurate in many cases for a small custom stories dataset and the performance is expected to increase with a bigger dataset.

### **Keywords:--**

Image Classification, Convolution Neural Network, Long Short Term Memory, Language Modelling, Text Pre-Processing.

## Big Data and Machine Learning Integration the Benefits and Research Issues In the Huge Data Processing

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**Dr.K.Umapavankumar**, Associate Professor, CSE, Malla Reddy Institute of Technology, Hyderabad

### **Abstract:--**

The generation of the data from individual member to MNC incurring more burden on the existing architectures. The current requirements of processing and storing huge data may not be suitable to the existing storage and processing techniques. The fundamental issue is kind of the data populated every second in the social media even reaching to peta bytes of the storage the processing of this huge data is another problem.

Here the concept of big data comes into the picture, Hadoop is a frame work which is helpful to store huge amounts of the data and to process the data in parallel and distributed mode. The framework is the combination of Hadoop Distributed File System(HDFS) and Map Reduce(MR). HDFS is a distributed storage which allows huge storage capacity solves the issue of abnormal data population, where as the processing of the data is taken by the Map Reduce which provides a versatile model of processing the huge amounts of the data.

The other dimension of the current work is to analyse the huge amounts of the data which is beyond the scope of Hadoop based tools. Machine Learning(ML) is a class of algorithms provides various techniques to analyse the huge data in a better possible way.

ML provides classification techniques, clustering mechanisms and Recommender systems to name a few. The importance of the current work is to integrate the Hadoop and R which in turn the combination of Big data and ML. The work provides the key benefits of such integration and future scope of the integration along with possible research constraints in the reality. We believe the work gives a platform to researchers so as to extract the future scope of the integration and difficulties faced in the process.

### **Keywords:**

Hadoop, Framework, R ,Parallel Processing, Distributed Storage.

## Power Quality Improvement Using Three Phase Four Wire Unified Power Quality Conditioner

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### *Abstract:--*

This paper presents the control strategy for selective compensation of power quality problems through a three phase four wire unified power quality conditioner. UPQC includes shunt Active power filter and series Active power filter. These two filters consist of voltage source inverter (VSI) separately and are connected by a common DC link. Here the control technique used for both filters is synchronous reference frame (SRF). This whole project is validated through simulations using MATLAB software.

### *Keywords:--*

Unified Power Quality Conditioner, voltage source inverter, shunt and series active power filter, power quality.

## **Design a Cost Optimum for 5G Mobile Cellular Network Footing on NFV and SDN**

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**Yerrolla Chanti**, Department of Computer Science and Engineering, S R Engineering College Warangal Urban, India

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**Srinivas Aluvala**, Department of Computer Science and Engineering, S R Engineering College Warangal Urban, India

**Bandi Bhaskar**, Department of Computer Science and Engineering, S R Engineering College Warangal Urban, India

### ***Abstract:--***

With the short development of patron traffic, management innovation, and the tenacious want to lessen prices, the existing portable administrators are seemed with a few problems. In structures administration, thoughts have advanced going for cost lower, increment of device adaptability and association adaptability, to be precise software program described networking (SDN) and community features virtualization (NFV). Network functions virtualization mitigates the reliance on tough product, where flexible device capacities are conveyed as programming digital device works on ware servers at cloud infrastructure, server farms. SDN offers a programmable and adaptable system control by means of decoupling the versatile system features into manipulate plane and records plane capacities. The shape of the reducing part flexible system (5G) needs new arrangement and dimensioning fashions to accomplish an ideal plan which supports extensive scope of site visitor's requests. We recommend 3 improvement models that go for limiting the machine burden cost simply as server farm belongings fee by means of finding the precise situation of the server farms too the SDN and NFV portable system capacities. The development arrangements show the exchange offs between the numerous server farm groups, i.e., centralized or circulated, and the numerous value elements, perfect machine burden cost or server farm property fee. We advocate a Pareto best multi-target model that accomplishes stability among device and server farm value. Moreover, we use earlier derivation, in view of the preparations of the unmarried objectives, to preselect server farm areas for the multi-target model that consequences in lessening the streamlining intricacy and accomplishes reserve price range in run time at the same time as preserving an insignificant optimality hole.

### ***Keywords***

Network Functions Virtualization (NFV), Software Defined Networking (SDN), 5G, versatile center system, advancement.



## Evaluation of Machine Learning Models for Credit Scoring

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**Kovvuri Ramya Sri** , G.Narayanamma Institute of Technology & Science, Hyderabad, Telangana

### *Abstract:--*

It is significant for banks to develop credit card services to compete with foreign capital, On the other side it is urgent to improve the ability to control credit risks. Customers are the valuable assets of any bank. The payment of timely bills is important for the running of banks. But if the customers do not pay on time, it may incur huge loss to any financial organization. In this paper we try to build several models which will predict the credit score of customers. Credit score is calculated on banking and finance datasets. To show the relation between attributes, the correlation matrix is generated. In the experimental part, the graphs are generated, which shows the contrast for better analysis. This paper predicts and proposes the factors or attributes which optimize the profits of any banking organization. The best model will be selected based on the accuracy, sensitivity and specificity values obtained.

### *Index Terms*

Credit Scoring, Machine Learning, Weight Of evidence analysis, Crisp DM Framework.

## Evaluation of Machine Learning Models for Employee Churn Prediction

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**P.V Ajitha**, Student, G. Narayanamma Institute of Technology & Science (for Women), Hyderabad, Telangana

**Abstract:--**

The aim of this paper is to study a new prediction method for the churn problem in Information Technology Sectors. For this end, a logistic regression model is built, which integrates a machine learning algorithm logistic regression model from statistics and data analytics. First, we have to classify churn and non-churn employees utilizing the logistic regression model to, and then the organization can do the needful to retain them. At last, we present the outcomes of a simulative assessment and prove that the presented method is conducive to analyzing the churn problem in human resource analytics.

## Privacy Preserving for Cloudlet based Healthcare Data Using NTRU and Bloom Filter

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**M.Bhavani**, Assistant professor, G. Narayanamma institute of technology & science, Hyderabad, India.

**Abstract:--**

Healthcare social platform, together with Patients LikeMe, can achieve data from other similar patients through data sharing in phrases of person's own findings. Though sharing scientific data on the social community is useful to both sufferers and doctors, the sensitive records is probably leaked or stolen, which reasons privacy and security issues without efficient protection for the shared data. In this paper, I increase a novel healthcare system through utilizing the controls of cloudlet along with utilize Bloom filter hash intended for protection. The purpose of cloudlet consist of confidentiality defense, information distribution & intrusion detection. The information build up through wearable gadget be transmit toward cloudlet. That information is within adding in the direction of the distant cloud in which medical doctors is able to acquire the accurate of access to illness study.

**Keywords:--**

Cloudlet, Data Collection, Intrusion Detection

## An Investigation on Clustering Based Optimized Routing Protocols in Wireless Sensor Network

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**Puttamadappa C**, Professor, Department of Electronics and Communication Engineering, Dayananda sagar University, Bengalor, 500068, India

**H.N.Suresh**, Professor, Department of Electronics and Instrumentation Engineering, Bangalore Institute of Technology, Bangalore-500068, India

### ***Abstract:--***

Routing in wireless sensor network environment plays a critical role where it might be affected by various factors which would lead to data transmission failure/corruption. Energy is the most concerned factor which affects the routing task mostly due to their limited availability. Thus routers require most efficient routing protocol which can perform data communication with less energy consumption. This routing protocol should be capable of adapting critical conditions happening on routers. Another problem that is mostly found on routing task is security. The security issues created by the hackers would corrupt/steal the data when it is being transmitted to the destination nodes. The routing protocol should also capable of tolerating the security issues and needs to ensure the successful data transmission. In this analysis work, various hierarchical clustering algorithms that are proposed for grouping the wireless sensor nodes those is present in the environment is discussed. The clustering that can be applied on both heterogeneous and homogeneous wireless network environment is discussed. The operation and functionality of each clustering algorithms are given in depth to understand the routing skill of each nodes. The merits and demerits that are present in the every clustering algorithm are presented to find the better clustering approach. The experimental analysis of every algorithm are done and compared in terms of various performance measures to find the better clustering approach that can be utilized for further scenario.

### ***Keywords:***

Sensor nodes, Clustering, Energy, hierarchical manner, Homogeneous, Heterogeneous

## Trust Sensing Based Secure Routing For Wireless Sensor Networks

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**K. Ramalinga Reddy**, Head of the Department, Dept. of ETM, G.Narayanamma institute of technology and science, Hyderabad, India

### *Abstract:--*

A trust sensing based mostly secure routing mechanism (TSSRM) with the light-weight characteristics and also the ability to resist several common attacks at the same time is planned because of the intense result of the typical network attacks which are caused by the limited energy and the poor deployment environment of wireless sensor network (WSN) on data transmission. On the other hand, route selection algorithm of security is also optimized by taking the trust degree and QoS metrics into account. TSSRM can progress the security and effectiveness of Wireless sensor network. The behavior of the sensor nodes is by analyzed including the movement and energy consumption of sensor nodes. The trust sensing based secure routing mechanism for wireless sensor network is proposed to solve the network overhead and the security of multi-hop information transmission. When network entities do not have much awareness how to trust one other, they either naïvely believe in the good intentions of other entities. Without trust, a network entity has to delegate a task, such as sending data to a destination, to someone who may not be trustworthy. This could cause failures of important network functions like routing. The proposed routing algorithm is applied to secure routing mechanism to achieve the efficient and reliable transmission of data and to further ensure the security of data transmission. The Extension of the trust sensing based secure routing is that whenever the malicious nodes gets identified depending on the trust degree it sets a multipath routing by which the network overhead can be reduced and there will be an increase in the packet delivery ratio.

### *Index Terms:*

Malicious nodes, QOS requirements, reliable data transmission, wireless sensor network, multihop communication, network overhead.

## **Data Summarization based on Multiple Attributes in Unreliable Categorical Data**

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**N. Swapna Suhasini**, Assistant Professor, Department of CSE, MallaReddy Institute of Technology, Maisammaguda, Secunderabad-500100, Telangana.

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### ***Abstract:--***

Data summarization in preposterous or doubtful front page new streams is an integral production in relational story sources. For prosperous announcement summarization on between rock and hard place story cat and dog weather evaluation by all of the jumps of story streams environments. Traditionally one-class learning work summarization act was approved to translate the indistinguishable illustration and then constitute Undefined One Class Classifier (UOCC) by utilizing such class summarization effectively. This framework substance density based rule of thumb to inspire possible did a bang-up job to garner each chides mutually pragmatic front page new maintenance; UOCC furthermore provides support vector (SV) cross-section to summarization theory centered on user's likings and article in the stored data source. It was produced potential database on data illustrations. It is unsuccessful to sponsor data distribution based on data characteristics to use data illustrations with cluster-based data sets. We proposed and implemented Enhanced Categorical Cluster Ensemble Approach (ECCEA) to handle data relations between different attributes to explore data from uncertain data. This approach consists of matrix to describe anonymous records into groups in indeterminate dependable data streams with attribute splitting and feature selection. Investigational outcomes of proposed approach give better and efficient cluster ensemble results with multi attributes in real time data sets.

### ***Keywords:—***

K-Means, Uncertain One Class Classifier, Cluster Ensemble Approach, Support Vector mechanism, Feature Representation.

## **Aerial Surveillance and Monitoring Using Computer Vision**

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**D.Vaishnavi**, Professor, Dept. of Computer Science, PSG arts and Science College, Hyderabad, Telangana

**M.Sreevidya**, Professor, Dept. of Computer Science, PSG arts and Science College, Hyderabad, Telangana

***Abstract:--***

With the advent of new technologies there's a great threat to information and hence, security to a system plays a crucial role these days. Monitoring a large event, a protest, or even an individual, drones - unmanned aerial vehicles can provide the team with the overview they need to maintain control. UAV monitoring systems provide a number of benefits to users focused on public safety and civil security. This paper covers the capturing, detection and tracking the path of a drone and tracking by detection method used to track the multiple objects visual motion by detecting the objects in the frames and observing the track throughout the entire frame and with the help of deep learning(subset of machine learning) techniques. This method gives high efficient tracking and considers longer term connectivity between pairs of detections and models similarities as well as dissimilarities between the object's position, colour and visual motion. We present the Hungarian method which gives a better performance and solves the problem of occlusion occurred.

***Keywords:***

Hungarian Algorithm, Image processing, Kalman filters, unmanned aerial vehicle.

## Design and Implementation of 4x4 bit Multiplier using Dadda Algorithm

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**B.Neerajakshi**, M.Tech Student, G.Narayanamma Institute of Technology and Science, Shaikpet, Hyderabad, India

### **Abstract:--**

Multiplier is one of the most important arithmetic modules in the fast computing applications. Multipliers and their associated circuits like half adders, full adders and accumulators consume a significant portion of most high speed applications. In order to reduce the hardware which ultimately reduces an area, power and propagation delay, efficient full adders are used in the multipliers. They also reduce the power and propagation delay of the multiplier. In this paper 4x4 multiplier is designed using Dadda algorithm and 10T full adder. Use of Dadda algorithm reduces 10.47% of the power dissipation, 27.67% of the propagation delay and 35.34% power delay product compared to Array multiplier. The simulations are performed using Tanner EDA of 45nm technology.

### **Keywords:**

Multiplier, Full adder, Half Adder, Array, Wallace, Vedic, Dadda, Power dissipation, Propagation Delay, Power delay product.



## Smart Machine Application to Make a Fire Monitoring System More Dependable

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**CH Sravanthi**, Assistant Professor, Department of Information Technology, GNITS, Telangana,India

### **Abstract:--**

The dependability of a fire monitoring system can be improved by introducing a mobile smart machine in addition to the fixed IOT sensors .The parameter values obtained from the fixed sensors can prove to be inaccurate .The mobile smart machine, equipped with the temperature, smoke and gas sensor is introduced to acquire more reliable values for the related parameters, thus helping in better and quick decision making. A smart machine also guides the user to identify faulty conditions like false alarms.

The smart machine is basically a robot supported with wheels .It is mounted with the temperature, gas and smoke sensors. Ultrasonic sensor is also connected to help the smart machine to avoid collisions with obstacles in its path The live video streaming of the monitored area is also provided by the camera setup on the mobile robot. The software and hardware involved in implementing the smart machine is achieved by Raspberry PI and Arduino Uno. A radio frequency identification module is also supported to know the exact location of smart machine in the monitoring scenario which in turn helps in narrowing down the search for a faulty component .The control of the smart machine movement is done at the user interface.

### **Keywords:**

Arduino Uno, Dependability, IOT sensors, smart machine, RFID.

## Fine Grained Two Security Capabilities - Cloud Computing Services Primarily Based On Networks

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### *Abstract:--*

For net primarily based Cloud Computing Services we tend to introduce Fine Grained 2 issue Access management. The Basic Concept behind the Fine Grained 2 issue access management is getting the permission from 2 parties during this case we tend to consider 2 parties as user secret key and lightweight device. In 2 issue access system an attribute based management mechanism is enforced from the assistance of user secret key and light-weight security device. User must satisfy with this 2 for obtaining access to system. If anyone fails user can't get the access to the system. The access control system denies the access of the user to the system if multiple user have same attribute set price.

### *Index Terms*

Security, Cloud computing, Performance analysis, Access management, SEM

## Hardware Implementation of Polar Codes for very Short Length Messages

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### *Abstract:--*

An emerging error-detection and correcting technique developed in the recent years is Polar codes applicable in next generation wireless communications. This coding technique does not focus on randomization of the bits like other techniques does as it is based channel polarization and achieves almost Shannon Capacity also. This paper presents a successive cancellation (SC) algorithm based FPGA implementation of Polar codes for very short length messages of 8 bits. The implementation focuses on low complexity decoder for high speed applications and is to be extended for variable length like 32,128,256,512 bits to access the hardware complexity and design aspects for further implementation. Simulation results show the performance of polar codes the scope being that these codes outperform compared to LDPC and Turbo codes in wireless applications.

### *Keywords*

Polar codes, Successive Cancellation, FPGA, error detection and correction, Shannon theory.

## MIMO-OFDM Using Error Correcting Codes

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**G. Merlin sheeba**, Assoc.prof,ETCE dept ,Sathyabama institute of science and Technology,Chennai,India

### **Abstract:--**

In the recent years ,the demand for multimedia communication is growing rapidly. Orthogonal frequency division Multiplexing(OFDM) is used in 4G wireless communication systems because of its large coverage area, high data rate . If a multiple input multiple output (MIMO) Technique is incorporated in OFDM ,it gives high speed and reliable transmission in wireless communication. MIMO is the suitable technique for high speed data multi carrier transmission ,it gives significant improvement in capacity and is used in the long term evaluation standard. If Forward error correction (FEC)codes are incorporated in MIMO-OFDM system, further improvement in performance can be achieved. In this paper an extensive literature survey is carried out for FEC coded MIMO-OFDM systems.

The forward error correcting codes like convolutional codes , Low density parity check(LDPC)codes ,Turbo codes, Polar codes and their Concatenations are applied to MIMO-OFDM system and bit error rate (BER) performances are analyzed .The performance of different FEC-coded MIMO-OFDM systems Is analyzed with different channels (Additive white Gaussian noise(AWGN), Raleigh, Rician ) under different Modulation schemes (PSK16,QAM32).The performace of FEC coded MIMO-OFDM systems is compared with different antenna configurations(2×2,4×4). After comparing the BER performances with the above parameters ,the best performance FEC coded MIMO-OFDM systems are determined .

### **Keywords:—**

MIMO, OFDM, FEC, AWGN,BER,OSTBC

*Organized by:*

**G Narayanamma Institute of Technology & Science for Women (GNITS)**

*and*

**Institute For Engineering Research and Publication (IFERP)**

## An Autonomously Sleep, Listen and Transmit Scheduling Technique for Wireless Sensor Networks

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**K. Sarada**, Assistant Professor, ETM Department, G.Narayanamma Institute of Technology and Sciences, Hyderabad.

**Abstract:--**

Sleep/wake-up scheduling is one of the elementary issue in Wireless Sensor Networks, because the energy of the sensor nodes are finite, and they are not rechargeable. The motivation of sleep/wake-up scheduling is to save the energy of each node by keeping nodes in sleep state as long as feasible (without sacrificing packet shipping performance) and thereby increasing their lifetime. In this paper, a self-adaptive sleep/wake-up scheduling is used. Most of the existing studies uses the obligation cycling technique, which has a tradeoff between energy consumption and packet delivery delay, the proposed approach does not use duty cycling, as it is based on reinforcement learning technique. In reinforcement learning technique, each node has an opportunity to decide its private operation mode (sleep, pay attention or transmission) in a decentralized fashion in each time slot. Simulation results shows the performance of the proposed approach in different circumstances.

**Index Terms –**

wireless Sensor Networks (WSNs), decentralized, Simulation.

## Machine Learning in a Twitter Sentiment Analysis of Health Care Tweet & Using Big Data Frame Work

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**Dr.K.Prabha**, Assistant Professor, Department of computer science, Periyar University PG Extension centre, Dharmapuri.

### **Abstract:--**

Content mining has moved toward becoming pole mainstream inquire about zone. It can manage AI utilizing content investigation. It contains unstructured content which enormous measure of data can't just strategy by preparing PC and information from unstructured content finished by content mining. Content mining manages numerous strategies just as from data recovery, data extraction and furthermore common language handling and associate with calculation and techniques for KDD, web index and data retrieval have most explicit pursuit Query language. This exploration fields use information mining calculation, for example, grouping, bunching, associatioie rule. This paper contains, though commentator of content mining strategy devices, and different applications.

### **Key words:**

Text mining, Data mining, Natural language process, Machine learning, social media.

**A wavelet based protection scheme for micro-grid  
with multiple distributed generations and  
Static Var Compensator**

**K V Dhana Lakshmi**, Asst Professor, G.Narayanamma Institute of Technology and Science for Women, Hyderabad.

**S S Tulasi Ram**, Professor & Dean, G.Narayanamma Institute of Technology and Science for Women, Hyderabad.

**G.Vamsi Priya**, PG Student, National Institute of Technology, Goa

***Abstract:--***

Microgrid technology can effectively integrate the advantages of distributed generation, and also provide a new technical way for large scale application of grid-connected generation of new energy and renewable energy. Microgrid combines distributed power, load, energy storage devices and control devices, forming a single and controllable power supply system. Protection must respond to both utility grid and Microgrid faults. If the fault is on the utility grid, the desired response may be to isolate the Microgrid from the main utility as rapidly as necessary to protect the Microgrid loads. If the fault is within the Microgrid, the protection coordinator isolates the smallest possible section of the Microgrid to eliminate the fault. In order to cope with the bi-directional energy flow due to large numbers of micro sources new protection schemes are required. This paper proposes a protection scheme for microgrid with multiple distributed generations and Static Var Compensator using Wavelet based multi-resolution analysis is used to find the detailed coefficients of the signals to calculate the fault index. Fault indices of all phase currents at each terminal are obtained by analyzing the detail coefficients of current signals using bior 1.5 mother wavelet. The approximate decomposition of the current signals is utilized to detect and discriminate the faults from their respective terminals. This scheme is tested for various types of faults in the proposed system and it is found effective for detection of faults with various fault inception angle, the fault impedance at different distances with and without static var compensator.

***Keywords***

Microgrid, SVC, renewable energy sources, solar PV, wind and solar PV system, wavelet, Protection scheme.

## Security and Safety in Amazon EC2 Service – A Research on EC2 Service AMIs

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**K. Sudheer Kumar**, Assistant Professor, S R Engineering College, Telangana

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### *Abstract:--*

There are some multinational companies available in the market to provide cloud administrations, for example, Amazon Web Services, Microsoft Azure, and IBM Smart Cloud, etc. Nowadays an organization need to work on different technologies, it need not to install the technologies, it can simply acquire the technology available in online as a service. It is the best practice in the cloud based services that it allows the users to make their very own virtual images and offer them to with other users in the same cloud. Alongside these client shared virtual images, the cloud specialist organizations will likewise give the virtual images that have been preconfigured with open source database and web server to match our requirements. In this paper, we had made a survey to check the general security hazards related with the use of virtual machine images from the publicly accessible indexes of cloud specialist organizations. In down to earth, we had dealt with the open shared virtual images that are existed on the Amazon EC2 service. We examined the safety concerns of the virtual images which are accessible on the Amazon EC2 Cluster as the open AMI (Amazon Machine Images).

### *Keywords:*

Cloud service, virtual image, AMI, EC2.



## Location Sharing System with Enhanced Privacy in Mobile Online Social Network

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**Dr.I.Ravi Prakash Reddy**, Professor, Department of IT, G.Narayamma Institute of Technology and Science JNTUH, Hyderabad, Telangana, India.

### ***Abstract:--***

Area sharing is one of the basic segments in versatile online informal organizations, which has pulled in much consideration as of late. With the appearance of mobile networking, an ever increasing number of clients' area data will be gathered by the specialist co-ops in location sharing. Notwithstanding, the clients' security, including area protection and informal organization security, can't be ensured in the past work without the trust supposition on the specialist co-ops. In this paper, going for accomplishing improved protection against the insider assault propelled by the specialist organizations, we present another engineering with numerous area servers out of the blue and propose a safe arrangement supporting area sharing among companions and outsiders in area based applications. In our development, the client's companion set in every companion's inquiry submitted to the area servers is separated into numerous subsets by the informal community server arbitrarily. Every area server can just get a subset of companions, rather than the entire companions' arrangement of the client as the past work. Also, out of the blue, we propose an area sharing development which gives check capacity of the looking outcomes came back from area servers in a proficient manner. We additionally demonstrate that the new development is secure under the more grounded security model with upgraded protection. At last, we give broad exploratory outcomes to show the effectiveness of our proposed development.

### ***Keywords-***

sharing the location, encryption, privacy of location.

## **Multilevel UPQC fed grid connected Hybrid system for Sag and Swell mitigation**

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**P.Tejaswi**, Assistant Professor, EEE Department, G.Narayanamma Institute of Technology and Science Hyderabad, India

***Abstract:--***

This paper presents the cascade multilevel UPQC for sag and swell mitigation of a grid connected hybrid system. Power quality is the major problem facing by today's power system. Due to the use of power electronic converters and devices the harmonics are injected into the grid that may result in grid failure. To mitigate these harmonics custom power devices are used. UPQC is the custom power device that is used in this paper. The seven level cascade multilevel converter is used for both the series and shunt inverters of UPQC for better harmonic distortion. This system is connected to the PV+WIND hybrid system to provide effective utilization of the resources. The UPQC contains a DC link which controls the Sag and Swell, LG Fault and improves the power quality of the system. This system is simulated in MATLAB/SIMULINK.

***Keywords:--***

Cascade Multi Level Inverter (CMLI), Solar, Wind, PMSG, Voltage sag, Voltage swell, UPQC, DG, LG fault

## **A Situation Aware Emergency Path Navigation Using WSN**

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**T.Sunitha**, Assistant Professor, Dept. of ETM, G. Narayanamma institute of technology and science, JNTUH, Hyderabad, India.

***Abstract:--***

Navigation services which guide people to safe exits are more critical in saving people lives when emergencies happen. To achieve successful navigation for emergencies, the sensors need early and automatic detection of emergencies, and quick reaction with safe navigation paths to exits by continuous network monitoring and regular data transmission. Wireless sensor networks (WSNs) is the reliable infrastructure for emergency navigation services because of their easy deployment, affordable costs and continuous communication with neighbouring sensors. Most of the existing works fail in consideration of hazard levels of emergencies and the voidance capability of safe exits. Without any consideration of such aspects, existing navigation algorithms are not successful to keep the people away from emergencies with high levels of emergencies and could not encounter the congestion at exits. In this paper, the proposed system, a situation aware emergency navigation algorithm, considers the hazard levels of emergencies and voidance capability of exits and provide the mobile users in network the safest navigation paths to exits. The algorithm evaluates the situation aware emergency problem and establishes the hazard potential field which is theoretically free from emergency changes. By following the decreasing gradient of hazard levels, guaranteed success of navigation and optimal safety can be achieved.

## Cooperative Spectrum Sensing in Multiple Antenna Based Cognitive Radio Network Using an Improved Energy Detector

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**Dr.Sake. pothalaiah**, Vignana Bharathi Institute of Technology, Hyderabad, India

**Dr. R P Singh**, Sri Satya Sai University of Technology & Medical Science, Bhopal

**Dr.Dayadi.Lakshmaiah**, Vignana Bharathi Institute of Technology, Hyderabad, India

### **Abstract:--**

The performance analysis of cooperative spectrum sensing with the help of an improved energy detector is done in this paper. Cognitive radios are consists of multiple antenna. Each CR detects primary user signal with improved energy detection i.e. power 'p' of amplitude of primary samples. Each CR takes its own decision and forward to fusion center. The fusion center fuses all the decisions and take final decision of primary user is present or absent. The expressions for the false alarm probability and probability of missed detection have been derived and total error rate is calculated. Optimization of total number of CR, energy detection power 'p' and number of antennas at each CR is done with the help of graph and expressions by minimizing total error rate. It is shown that with the help of multiple antennas with very low SNR between PU-CR links, we can achieve minimum error rate.

### **Keywords:**

Co-operative Spectrum Sensing, Improved Energy detector, False Alarm Probability, Total Error Rate.

## A Privacy-Preserving Protocol for Verifiable File Search on the Cloud

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**A Harshavardhan**, Assistant Professor, Department of C.S.E S R Engineering College, Warangal, Telangana, India

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**Abstract:--**

Because cloud computing is increasingly popular, a great deal of documentation is outsourced to the cloud with decreased leadership costs and easy access. While encryption helps prevent user data confidentiality, it creates a difficult issue with well-functioning yet virtually efficient safe search features over encrypted information. It should always be encrypted before cloud outsourcing to preserve the privacy of personal documents that are stored in the cloud environment. Retrieving the same data on the cloud is also a still, tedious task. To obtain information, there are several methods available in which keyword-enabled data entry is one of the best methods. Most of these methods are restricted to the handling of a single keyword query. In order to improve search effectiveness and speed, a multi-key word-search method can be used to obtain a respective cloud.

**Keywords:**

File Search, Verifiability, Cloud Computing, MAC

## Test Accuracy Improvement in Face Recognition Using Convolutional Neural Networks

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**Dr. M Venkatanarayana**, Dean & Professor KSRM College of Engineering

### *Abstract:--*

Now-a-days face recognition plays a major role in identifying face of the specific person. There are different face recognition algorithms such as Eigenfaces algorithm, Local binary pattern histograms, Fisherfaces algorithm. All these algorithms face the problem of subject independence as well as translation, rotation, and scale invariance in the recognition of facial expression. In this study, the face recognition using neural network and convolutional neural network (CNN) techniques were utilized and implemented with the help of Python software 3.6.6. It is noticed that the test accuracy is improved against translation, rotation, and scale invariance in face recognition using CNN.

### *Index Terms*

convolutional neural network(CNN), face recognition, python software, test accuracy.

## Adaptive Exploration-based Whale Optimization for Image Segmentation Based on Variable parametric Error

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### **Abstract:--**

Image segmentation is the process of splitting an image into numerous segments. Its major purpose is to change or simplify the image, which could be more significant and simpler to examine. However, it does not execute well while segmenting complex images with non-homogeneous parts. In this paper, a hybrid image segmentation model with the aid of Active Contour and Graph cut techniques is proposed. Moreover, it extracts the mutual information from two adopted segmentation schemes, and subsequently, the high-intensity and low-intensity pixels of resultant images are grouped by Fuzzy Entropy Maximization (FEM) method. A modified optimization algorithm termed as Adaptive Exploration based Whale Optimization (AEW) is used for solving the FEM problem. The performance of the proposed Active contour Graph cut Fuzzy Entropy-based Segmentation (AGFES), (AEW-AGFES) is algorithmically analyzed in terms of various performance measures to substantiate its effectiveness.

### **Key Words: -**

Adaptiveness; Whale Optimization; Image segmentation; Active contour; Graph cut technique; Fuzzy Entropy Maximization Nomenclature

Acronyms	Descriptions
FCM	Fuzzy C-Means
GM	Gaussian mixture
FPR	False Positive Rate
FNR	False Negative Rate
NPV	Net present Value
FDR	False Discovery Rate
MCC	Matthew's Correlation Coefficient

## Restoring RGBD Images from Occlusions

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**T.Venkateswarlu**, Professor, Department of ECE, S.V University College of Engineering, Tirupati, A.P., India

**Abstract:--**

This paper presents a new approach to remove the occlusions from RGB-Depth images. The segmentation of the occlusion is achieved through the thresholding and depth information provided by the Kinect depth sensor. The initial segmented result may prone to errors due to the color similarity between the foreground and background. Those are eliminated using the morphological operations. The segmented portion is removed from the image and the hole left after removal of the occlusion is filed by the inpainting technique. Quantitative and qualitative results are presented to demonstrate the effectiveness of the proposed technique.

**Keywords:**

Image segmentation, Image de-fencing, Image Inpainting, Depth map, Morphology.



## Performance analysis of MIMO OFDM for QAM by using VBLAST MMSE technique

**M.Jyothsna**, Assistant Professor, ETM, GNarayanamma Institute of technology and Science for Women, Hyderabad, Telangana

**Abstract:--**

In this paper the performance analysis of multiple input multiple output with orthogonal frequency division multiplexing (MIMO-OFDM) system with regard to bit error rate per signal to noise quantitative relation (BER/SNR) for detection technique V-BLAST (Vertical Bell Labs Layered Space time) minimum mean square error (MMSE) and Minimum mean square error (MMSE) is presented by using Quadrature amplitude modulation. A 4X4 MIMO-OFDM system is used for the performance evaluation. The simulation result shows that the performance of V-BLAST based detection technique i.e., V-BLAST MMSE is much better than the conventional method MMSE.

**Index Terms: -**

MMSE.,V-BLAST,MIMO-OFDM

## Efficient Computation and Communication Overhead Reduction of IoT using Edge Server

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**M.Deepthi**, Assistant Professor, G. Narayanamma Institute of Technology and Science, Hyderabad.

### *Abstract:--*

When the IoT smart gadgets quantity increase sequence through additional devices, potential security troubles stand up such as information leakage, modification, integrity, and unauthorized admittance. Therefore, it's necessary for collective information to ensure privacy, reliability, moreover obtain accurate access to influence distribution at the threshold. Intended for increase in sequence security, the significant security leaning dispensation that include encryption, decryption, which acquire admittance towards control mechanism can be treated through resources from the person's gadget. Here IoT, the aid-constrained smart devices can't hold individual operating of extensive calculations for the reason where the safety-oriented operation will multiply the intense computational burden. We support a light-weight cryptographic method that IoT smart gadgets be able to proportion in sequence through others at the threshold of cloud-assisted IoT. Where every safety-oriented operation can be off-load to nearby aspect servers. Moreover, even though to start on through us acknowledging on information-sharing safety, we also endorse an information-looking method to look for desired information/shared information by using legal users on storage where all statistics are in encrypted appearance.

### *Key Words: -*

Cloud Computing, IoT, Integrity, Encryption, light weight cryptographic scheme, Edge server

## **Detection of Blast Cells in Microscopic Images Using Optimization Algorithms**

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**Dr.P.Subbaiah**, Professor of ECE, Nalla Narasimhareddy Engineering College, Ghatkesar, Hyderabad, Telangana State

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### ***Abstract:--***

Now a day's in medical field, the most prevalent and hazardous disease is blood cancer. It starts in bone marrow where the blood is produced and prevents many of its regular functions. At an approximation for every three minutes one person in the world is diagnosed with the blood cancer. Early detection of the cancer is necessary for the proper treatment, so as to save the lives of mankind. In general the blood cancer diagnosis will be performed by visual examination of the blood samples of the patient under microscope. The blood cancer detection accuracy of this method depends on the technical skilling abilities of the operator and often leads non-standardized report. To improve patient diagnosis various image processing methods are developed to extract useful information from microscopic images. This could help Hematologists in their diagnostic process.

In this paper pre-processing and post-processing methods are applied on microscopic images. These images will be acquired from either public or private database. In this work the images were collected from Microscopyu which is a public database. Pre-processing methods involves color conversion i.e. RGB to grayscale, removal of noise by median filter and an improved contrast enhancement technique CLAHE is implemented. Later Post-processing methods are applied. In this stage Otsu segmentation and optimization algorithms are combined for improving segmentation accuracy. Optimization algorithms used are Particle Swarm optimization (PSO) and Cuckoo Search algorithms (CSO) and Finally features of the segmented image can be extracted from d Scale Invariant Feature Transform (SIFT) . In this work existing method is PSO and proposed method is CSO. At the end the qualitative analysis of the work is done through the statistical parameters like segmentation accuracy, sensitivity, specificity, PSNR and CPU time.

### ***Index Terms***

Leukemia, Enhancement, ACO, PSO, SIFT.

## Symmetric Lightweight Block Ciphers for Secure Medical IoT Application

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**Dr. G.Marlin Sheeba**, Department of Electronics and Telecommunication Engineering,, Sathyabama Institute of Science and technology, Chennai, TN, India

### **Abstract:--**

As IoT is growing rapidly, it faces challenges, such as handling huge amounts of data, processing power deal with energy consumption, address security threats. In medical IoT, devices communicate less human interventions. Medical IoT has also exposed to many security attacks. If any unauthorized device access to the network and may damage the network connection. This leads to the security parameters and network privacy being compromised. Also IoT utilizes the cloud computing concept, which has many security issues and challenges. Apart from these issues, the resource-constrained devices, which have less power for computation, low life of power supply, a small amount of memory, and low bandwidth, so an efficient security solution is being required that will not crunch the resources of IoT. To address these challenges in an IoT environment, the increasing demands for the use of appropriate cryptographic solution by using light weight block ciphers for constrained and low-resource devices.

### **Keywords-**

IoT, FPGA, lightweight cryptography, ciphers - Present, Boron, QTL, Rectangle, ESF, Hight, Cha cha

## Deep Graph Learning Based Approach for Identification of Text in Scene Video

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**Dr.M.Seetha**, Professor/GNITS

**Dr.S.Viswanadharaju**, Professor/JNTU-Jagtial

### **Abstract:--**

Content based analysis, retrieval, searching of scene video has become a key area under computer vision. Apart from indexing and retrieval of videos, demands for video analysis to monitor illegal videos have revolutionized the text detection problem. Because of complex background, low contrast, illuminated, variable font sizes, traditional approach of video based Optical Character Recognition (OCR) system performs satisfactory to detect the text from video. Later, two state-of-the-art methods like SIFT and MSER outperformed to detect the text in video but both of these methods fails to detect with complex background. The proposed architecture utilizes the deep graph learning model to detect and identify the scene text from video in two stages. First, regions of similar nature are extracted from the frames by applying undirected graphs. Second, the extracted regions are fed to the learning model to obtain the features which are convolved with internal layers to find the probability of existence of text by calculating the gradients and gray level contrast between text and background. Compared to the conventional detection methods like SIFT and MSER, the detection rate based on deep graph learning can reach 90%. Experimental results show that proposed method is effective compared to two state-of-the-art methods SIFT and MSER.

### **Keywords:**

Deep Learning, Graphs, Video, Scene text, CNN, Feature maps.

## **Adaptable E-Learning Tool to Support Kids with low IQ levels in Indian Languages**

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**Yerabati Srinidhi**, Department of CSE, G Narayanamma Institute Of Technology And Science[For Women]

**Gannarapu Aneela**, Department of CSE, G Narayanamma Institute Of Technology And Science[For Women]

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### ***Abstract:--***

Technology has boomed the field of education through different resources by aiding the students to learn on their own and helping the teachers as well. According to the Economic Times, Dec 23,2017 India has 20.42 lakh specially challenged children with low IQ levels aged between 0 and 6 years are identified. Around 71% of them - 14.52 lakh children - are in rural areas. In the south, Telugu twin states Andhra and Telangana has 1.27 lakh children, followed by Karnataka - 92,853 - Tamil Nadu - 62,538 - and Kerala - 26,242. Slow learners generally are the kids with low IQ levels (due to learning disabilities), should be equipped with different teaching methodologies to meet their needs. In the recent past, there are many research scholars working across the world to provide supporting aids which are personalized based on the assessment of the child. In this work specialized teaching method is adopted through an e- learning tool and a mobile application which aids in learning basics in Telugu. This E-learning tool helps primary kids with learning disability, to learn basics in their native language in interactive mode.

### ***Index Terms***

Intelligent Quotient (IQ), Assistive tool, Assessment, Training, Diagnosis

## **A Command Line Tool for Tracking Error Details of Program Using Web Scrapper**

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**R Suhasini**, CMR College of Engineering & Technology, Hyderabad

***Abstract:--***

Web scraping, a software technique is used to extract information from any website. The proposed system is a command line tool that uses web scrapping to extract the relevant data from stack overflow website using the library "beautiful soup". Programmers find difficulty to browse the information about the error encountered during the execution of their program. They take more time to find the appropriate information about the error. The aim of the proposed system is to help them for tracking error details thereby reducing/nullifying their browsing time for retrieving error details. This tool is implemented for five different programming languages and it works for almost all the operating system except windows 10.

## **Recent Challenges in Electrical Engineering and the Solution with IT**

**B Koti Reddy**, Scientific Officer, DAE

**B Sree Bindu**, ECE, GNITS, Hyderabad(India)

### ***Abstract:--***

Electrical engineering is a broad field right from Electrical Power Generation to Distribution to end users. With deep penetration of Power Electronic Devices (PED) into electrical system, it has become complex to understand and control, but has given many advantages. Computer engineering is also an integrated branch of several fields of engineering like electrical and computers, which focuses on programming, and integration with hardware devices. Electrical engineering is always a challenging field which requires a regular up keeping with proper control and communication system. This paper aims to review the existing electrical power system, various challenges like increased demand, cyber attacks, power electronic technology trends, the opportunities emerged and the action plan to mitigate them with the use of Information Technology(IT) for a sustainable development.

### ***Index Terms***

Communication, Electrical, Electronics, GOT, IOT, Smart Grid.



## Color Threshold Method for Tumor Detection in Brain MRI Images

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**Dr T.Ramashri**, Professor, Department of Electronics and communication Engineering, S.V.University, Tirupati

**Abstract:--**

Brain tumor in MRI ,T1, T2, and FLAIR MR images are the most interesting area in medical image application field. In this paper a color based threshold algorithm is used to segment the tumor region from normal white matter, edema, gray matter, cerebrospinal fluid from MRI images. The main objective is to develop an automatic technique for detecting tumor in brain. The proposed color based threshold technique converts the gray level MRI images into color space image and then separate the portion of tumor objects from other items of MRI Image by setting the threshold value. The color threshold is done by modifying gray level thresholding technique. Its' accuracy is improved by the use of morphological process where the object to be detected is denoted as white leaving the background dark. An advanced morphological operation is done for fine refinement of segmented tumor region. The experimental results demonstrates various performance metrics and proved to be better compared with gray level threshold in terms of accuracy. Then its' location is tracked by obtaining its' coordinates from the image.

**Key words:**

color threshold, Brain tumor, MRI Images

## Miniature UWB Antenna with Band Dispensation

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**MVS Prasad**, Department of ECE, CMR college of Engineering &Technology , Hyderabad, Telengana.

**MBR Murthy**, Department of ECE, CMR college of Engineering &Technology , Hyderabad, Telengana.

### **Abstract:--**

Multisensor image fusion is one of the widely researched areas in the field of image processing. The highest spatial content can be achieved while preserving the spectral resolution of an image with spatial information of a high resolution panchromatic (PAN) image combines with spectral information of a low resolution multispectral image (MS). This paper derived and renovates block-based feature level contourlet transform with neural network (BFCN) mannequin for image fusion. The proposed BFCN mannequin combines Contourlet Transform (CT) with neural network (NN), which performs a vital role in feature extraction and detection in machine learning applications. In the designed BFCN mannequin, the two fusion techniques, Contourlet Transform (CT) and neural network (NN) discussed for fusing the IRS-1D images using LISS III scanner about the places Patancheru, Mahaboobnagar Hyderabad and Vishakhapatnam in Andhra Pradesh, India. Also, Landsat 7 image data and QuickBird image data are used to carry out experiments on The designed BFCN mannequin. The features like contrast visibility, spatial frequency, the energy of gradient, variance, and edge information are studied. Since the learning capability of NN makes it feasible, Feedforward back propagation neural network is trained and tested for classification. The trained NN is then used to fuse the pair of PAN and MS images. The designed BFCN mannequin is analogized with other techniques to evaluate the quality of the fused image. The designed BFCN mannequin is an efficient and feasible algorithm for image fusion, and It is clearly shown that from the experimental results

### **Key-words:**

Contourlet Transform(CT), Neural Network (NN), block based , performance measures Image fusion

## Supervised Learning Algorithms and Evaluation Metrics in Machine Learning

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**Riyaz Hussain Shaik**, Department of Electronics and Communications Engineering, Rajiv Gandhi University of Knowledge Technologies, Nuzvid, Krishna District, Andhra Pradesh, India.

**Satya Prakash G**, Department of Electronics and Communications Engineering, Rajiv Gandhi University of Knowledge Technologies, Nuzvid, Krishna District, Andhra Pradesh, India.

### *Abstract:--*

In the era of emerging technologies, advancements in machine learning techniques have created a great impact in our lives. These advancements made us to develop new way of approaches to solve problems in different areas such as cancer diagnosis, predictive forecasting, speech recognition etc. Various machine learning techniques like Supervised learning, Unsupervised learning, Reinforcement learning have been extensively used to transform a computer into an intelligent machine to solve complex and challenging problems in real world. The advancements in our technologies in terms of computational power and acquiring large data made machine learning models to grow complex day-by-day. So building a good model is not sufficient since evaluating a model is equally important. So a good metric is needed to estimate the prediction error. Although plethora of metrics are available in the community of machine learning, confusion arises very often in choosing the right metric. However there is no common theory in choosing a metric to evaluate a model. This paper describes popular supervised learning algorithms along with the mathematics behind them. We analyze and evaluate the important evaluation metrics in classification and regression algorithms. After assessing the discussed evaluation metrics, a conclusion is made on choosing the right evaluation metric for the given problem.

### *Index Terms*

Supervised Learning, Classification, Regression, Evaluation metrics.

## An Advanced Iot Based Robot for Military Application

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**M.Anusha**, Assistant Professor, Vidya Jyothi Institute of Technology, Hyderabad.

**K.Deepika**, Assistant Professor, Vidya Jyothi Institute of Technology, Hyderabad.

### ***Abstract:--***

The main goal of this paper is to present an “ IOT based Robot which can monitor security conditions in military applications”. In this system, a robot is fitted with motors. A micro controller is used to control all operations. According to the motor operations the ROBOT will operate in specified directions. This robot can be controlled by commands received from the user through IOT technology. The robot is having Ultrasonic sensor which will detect the persons. Another sensor is the Proximity sensor which will detect the land mines in the military, if any one of the sensor activate the robot gets stopped and the buzzer will be alert.

### ***Keywords:***

IOT, Proximity and PIR Sensors.

## Object Detection in Camouflaged Environment with Texture Statistical Features

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**A Guruva Reddy**, Principal, Department of ECE, Universal College of Engineering

**C.B. Rama Rao**, Professor, Department of ECE, NITW

### *Abstract:--*

In camouflage image foreground will be hidden in the background image. Camouflage images can be natural and artificial. Detection of such hidden objects becomes difficult for a machine vision system and takes much time to detect and recognize whereas it is not difficult for Human Perception. Detection process involves two phases; feature search that helps in grasping the characteristic entities of an image like colour, shape, texture, pattern etc., and conjunction search which is useful for recognition of clues from multiple features. The background of the camouflage image may be uniform or non-uniform characteristic entities. Different operations can be performed on characteristic entities to make the background disappear in order to detect the foreground image. In this paper, survey on DE camouflaging methods and framework is proposed to detect objects in camouflage environments. Under this framework, textural smoothing followed by statistical characteristics is used to detect the camouflaged objects that will show a better performance based on statistical features. De-camouflaging can be used in war field, where soldiers hide themselves from the enemies with the texture similar to that of their background and decamouflaging is used to reveal the camouflages in the background

### *Keywords:*

Texture Smoothing, DWT, GLCM, Statistical Characteristics

## Sparse Representation for Image Restoration

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Research Scholar, Department of ECE SVU College of Engineering

**Dr. T Venkateswarlu**, Professor, Department of ECE SVU College of Engineering, Sri Venkateswara University, Tirupathi

### *Abstract:--*

Image restoration aims to restore the image from the degraded image. The image degradation is because of addition of noise when image is capturing. Researches proposed various algorithms to restore the image. In this paper the image is added with Gaussian noise of different noise levels. The input for the proposed system is a degraded image. The image is divided into overlapped patches and the similar pattern patches are grouped. These patches are placed as atoms in the dictionary. If the patches are considered over lapping type the size of dictionary is more. The entire image is trained to a dictionary with each column for a pattern. For the restored image patch of a window is searched for few best patches of similar pattern in the dictionary. For restoring the image both local and non-local sparsity is checked. The restoration problem is defined with two regularization terms, one is to find local similarity and other term is for non-local similarity. For solving regularization terms based image restoration problem using Split- Bregman algorithm. The efficiency of the algorithm is testes with natural images like cameraman, Lena, Barbara, House and parrot. The noise is considered is Gaussian noise with different noise levels. The parameters are estimated are mean square error, root mean square error, PSNR and FSIM. The results are compared with conventional methods NCSR, TVMM etc.

### *Index Terms*

Image restoration, noise, sparse representation, patch, regularization term.

## Improving Network Lifetime in Secured Wireless Sensor Networks

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### ***Abstract:--***

Caser protocol helps in achieving lifetime and security in wireless sensor networks. In this paper, Caser protocol maintains equal energy levels in neighboring nodes by selecting next neighboring node based on highest energy level rather than selecting same node repeatedly as existing systems. Security is maintained by following two modes like random, non-random mode which helps in protecting source information from attackers. Simulation is performed in NS2. Results show random mode consuming less energy than non-random mode. As extension non-random mode is improved for maintaining both modes better in terms of energy.

### ***Key words:-***

Energy Balance Control, Network Lifetime, Network Security, Wireless Sensor Network

## **Analysis on Active and Reactive Power Control Strategy Using ANFIS with Droop Controller for A Standalone RES**

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***Abstract:--***

In the past hybrid systems are popular in remote area power generation like satellite earth stations and radio communication systems today trend to update the existing systems into hybrid system for grid connected applications. Hybrid solar and wind sources are used to enhance the system stability and reliability. This paper provides analysis on current state of the simulation control strategies of standalone hybrid systems with battery storage. Intermittent nature of Renewable energy sources are creates the number of potential challenges for the standalone systems to control these problems in this paper we are used the proposed droop based control technique using adaptive neuron fuzzy interference system (ANFIS) controller with MPPT technique. The proposed method hybrid systems are to increase the generation and supply the quality of power from this hybrid system with different load conditions. The project is simulated on MATLAB Simulink and the results obtained are bus voltage and the frequency has better improvements

***Key Words:--***

ANFIS controller, droop control, frequency and voltage control, power quality



## Design Implementation of Single-Phase Cascaded H-Bridge 5 Level Inverters Using Arduino Controller

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### ***Abstract:--***

Multi-level inverters are emerging as the new breed of power converter options for high power applications. They typically synthesize the stair-case waveform which has reduced harmonic content. In this paper the main focus is done on analysis of output voltage of Single-phase Cascaded H-bridge Multilevel Inverter employing Sinusoidal Pulse Width Modulation Technique in MATLAB/SIMULINK. In SPWM, width of pulse is decided so that the harmonic content of the output waveform is reduced. Sinusoidal Pulse Width Modulation is used to eliminate the lower order harmonic. Also, hardware is developed for Single-phase 5 level Inverter. The semiconductor devices used are the MOSFETs. In order to maintain different voltage levels at appropriate intervals, the conduction time intervals of MOSFETs have been maintained by controlling the pulse width of gating pulses. Simulation and experimental results have been presented.

### ***Key Words:--***

CH-MLI, SPWM, Harmonics, THD.

## Free Space Measurement for Blind Person Using Histogram Equalization and Adaptive Region Growing

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### **Abstract:--**

Although significant research has been conducted to improve the standard of life of the blind person by using recent methods, it continues to be adequate for blindness rehabilitation. Increasingly, the computer vision system is being used to improve the performance of blind life's. In this paper, a technique is designed using histogram equalization and adaptive region growing to aid the blind person by giving the person information about the free space apart from the obstacles around him in all the directions for better mobility. It encompasses three modules, (i) histogram equalization (ii) segmentation and (iii) Kalman filtering. Histogram equalization module employs a canny edge detector to detect edges and then goes through with histogram equalization. Segmentation module makes use of an adaptive region growing for the segmentation process. Kalman filtering and comparison is made use of the final module to calculate the free space available. The input image is Kalman filtered and compared with the segmented image to have the free space calculation. The comparison is carried out with the help of the OR operator and the resulting figure give the free space. The proposed strategy is assessed under standard assessment measurements of False Positive, False Negative, True Positive and True Negative, explicitness, affectability, and precision for various group sizes. The simulations results obtained are plotted. This resulted in the following observations highest specificity, sensitivity and accuracy came around 0.90, 0.50 and 0.71 and similarly, average TP, TN, FP and FN came about 0.79, 0.5, 0.5 and 0.20 respectively. The high evaluation metric values indicate the good performance of the proposed technique in the area.

### **Keywords:**

Free Space Measurement, Adaptive Region Growing, Kalman Filter, Canny Edge Detector, Histogram Equalization Segmentation, Floor detection

## Machine Learning in a Twitter Sentiment Analysis of Health Care Tweet & Using Big Data Frame Work

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**Dr.K.Prabha**, Assistant Professor, Department of computer science, Periyar University PG Extension centre, Dharmapuri.

### **Abstract:--**

Content mining has moved toward becoming pole mainstream inquire about zone. It can manage AI utilizing content investigation. It contains unstructured content which enormous measure of data can't just strategy by preparing PC and information from unstructured content finished by content mining. Content mining manages numerous strategies just as from data recovery, data extraction and furthermore common language handling and associate with calculation and techniques for KDD, web index and data retrieval have most explicit pursuit Query language. This exploration fields use information mining calculation, for example, grouping, bunching, associatioie rule. This paper contains, though commentator of content mining strategy devices, and different applications.

### **Key Words:--**

Text mining, Data mining, Natural language process, Machine learning, social media.

## A Fuzzy Based Cross Layer Protocol for Trust Erection in Wireless Sensor Networks

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### **Abstract:-**

The cross layer model is used to admit synchronization, exchange by overlapping multiple layers and joint improvement of procedures holds the key purpose of primary layers. It enables elasticity, reliability and efficiency in communication method. The fuzzy logic system(FLS) is employed to implement node selection mechanism to offer an effective transmission. Amongst these assistances, this model outsidess a problem with security attacks in a network. To diminish these threats in a network, The Trust based fuzzy implicit cross layer protocol (TruFiX ) which is a Trust based cross layer module(T-XLM)based protocol is used to allow and grip inter layer data exchange to adapt traffic attentiveness and develop system form. The enhancement of TruFiX is proposed protocol to overcome the problem of malicious node during transmission by choosing an substitute route. By taking into account with simulation results, proposed protocol was compared with FUGEF and TruFiX which shows an increment in the packet delivery ratio(PDR) and throughput of the system.

### **Keywords:-**

Cross layer approach, Fuzzy logic system, wireless sensor networks, malicious node, forced fairness approach

## Forest Fire Prediction with Machine Learning

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**Abstract:--**

Data mining brings understandings, outlines, and descriptive and predictive representations from the large amounts of data available today in many organizations. We have many tools for data mining. One of those tools is rattle which runs on R programming language. In this paper, we used rattle to analyze forest fires which occurred in different regions during different periods of time. We can study whether rattle is an efficient tool by analyzing its time taken for delivering the result, error rate and much more.

**Key Words:--**

Data mining, machine learning, rattle, decision tree, error matrix

## Mobile agent based energy-efficient structured clustering algorithm for WSN

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**Srilakshmi Ravali.M** , Stanely College of Engineering & Technology for Women, Telangana state

**Abstract:--**

Wireless Sensor networks are densely and largely deployed in a variety of environments to sense real-world events. In this paper, we introduced a Mobile agent based energy efficient structured clustering algorithm (MAEESCA) for the sense of environmental factors to support long lifetime, energy-efficient operation. The simulation outcome illustrates that the proposed algorithm is improved at end-to-end delay, energy consumption with extending network performance compared to conventional routing algorithm. And the simulations are conducted for three different networks like SEECH, EESCA and MAEESCA.

**Key Words:--**

MAEESCA, Energy efficient, Clustering, wireless sensor networks.

## Hexagonal Fractal Antenna for 5G Applications

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**Dr. VSSN Srinivasa Baba**, Professor, ACE Engineering College, Hyd

### ***Abstract:--***

Fractals with self-similarity and space filling properties help to achieve wideband characteristics. In this paper, a wideband hexagonal fractal antenna for wireless 5G communications is presented. By introducing polygon shaped slots between hexagonal rings and partial ground plane, wide bandwidth is achieved. It was fed by an inverted L shaped strip line. The simulation and experimentation is done on FR4-EPOXY substrate of height 0.8 mm. The return loss is minimum for obtained resonant frequencies. The bandwidth is 19.4 GHz ranging from 3.6 GHz – 23GHz.

### ***Key Words:--***

Fractal, hexagon, partial ground plane, slots, wideband.

## **An Analysis of the Effect of Coper Slag as a Fine Aggregate on the Properties of Concrete**

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***Abstract:--***

Copper slag is a rough blasting grit or a by-product acquired by the process of copper smelting and refining. These copper slags are recycled for copper recovery. In this paper, we analyzed copper slag's feasibility and evaluate its total competence in M25 grade concrete. In this observation, a concrete mixture is applied with copper slag as a fine aggregate ranging from 0%, 20%, 40%, 60%, 80%, and 100% respectively. The strength of copper slag's implementation is accomplished on the basis of concrete's flexural strength, compressive strength and splitting tensile strength. From the obtained results, in concrete 40% percentage of copper slag is used as sand replacement. On 28 days, the modulus of elasticity increased up to 32%, the compressive strength increased up to 34% and flexural strength is increased to 6.2%. From this experiment, it is proved technically that replacing sand using copper slag as a fine mixture in M25 grade concrete.

*Organized by:*

**G Narayanamma Institute of Technology & Science for Women (GNITS)**

*and*

**Institute For Engineering Research and Publication (IFERP)**



## Population Prediction Using Machine learning

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### *Abstract:--*

The main objective of the paper is to find the best machine learning algorithm to predict the population outcome in the future. This paper discusses about the three algorithms, which are naïve Bayes, IBk and Random Trees. Machine learning tool used for running these algorithms is WEKA. In this test, WEKA is used to analyze the data and the three algorithms are added from the library. The data set is obtained from UCI repository and from number of instances available in the dataset, only limited number of instances is used to run the algorithm to keep the controlled environment for this test. Of all the three algorithms Naïve bayes algorithm shows the highest result.

### *Key Words:--*

Machine learning, Naïve Bayes, Weka, Lazy IBk, Random trees, UCI repository

## **Implementation of Space Vector Pulse width Modulation Technique with Reduced Complexity**

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**K.V.Sowmya**, Assistant Professor, Department of Electrical and Electronics Engineering, G. Narayanamma Institute of Technology & Science For women.

***Abstract:--***

This paper in recent years, the space vector PWM. (SVPWM) is attracting many researchers. Space vector modulation was originally developed as vector approach to pulse width modulation for three phase inverters. The SVPWM method is an advanced, computation intensive PWM method and possibly the best among all the PWM techniques for variable frequency drive application. The concept of space vectors is derived from the rotating field of AC machine which is used for modulating the inverter output voltage. In this modulation technique the three phase quantities can be transferred to their equivalent 2-phase quantities either in synchronously rotating frame or stationary frame. From this 2-phase component the reference vector magnitude can be formed and used for modulating the inverter output the process for obtaining the rotating space vector is explained in the following section, considering the stationary frame the active and zero switching states can be represented by active and zero space vectors, respectively. This conventional approach involves in complex computing and requires controllers with higher memory size. A simplified method for implementing space vector PWM is presented in this project which will reduce the complexity significantly.

***Keywords :***

PWM,SVPWM,VSI.

## **A Survey on Healthcare Monitoring System Using Smart Technology**

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### ***Abstract:--***

In earlier decades, the technology that was used in the medical field was traditional and time-consuming; As the technology is evolving by times, it proportionally helps in the development of the medical field. In cities, largely the rationale expressed is a time issue, in term period for rural areas; it's totally a different quandary. Recently National Health Profile (NHP), 2018: predicted the number of doctors and patient to be in the ratio of 1:1000 respectively. The information kiosk present in the public booth is used to deliver the data using automated system. By integrating with the video conferencing technology, transmits the audio and video signals for the patients present in the various location which gives the real-time effect. Most of the individuals obviate the requirement for consulting a doctor for some minor illness like fever, abdomen pain, headache etc. Handling different patient with identical names may often lead to confusion in regards to medical records. Due to the shortage of medical facility in rural areas often forces individuals to decide on self-medication. A Smart Healthcare Monitoring System (SHMS) provides individual consultation with a doctor through live Video Streaming (VS) may additionally save time spent on appointments and travel. The patient's pre-history stored in the database is constantly updated and the health status is persistently checked so that the health status of the donor can be easily checked before receiving the blood reducing the risk of transmitting the infections and diseases to the receiver. Such a service in villages can give veracious medical facility to the necessitous that has perpetually been a priority. So as for the "doctor's want and patient's preference", the case history of the patient is additionally continuously tracked within the cloud storage. The history of the patient is stored in the base, known by novel range identification for each subject using Radio Frequency Identifier (RFID) which analyses the stock-rate of the medicines. KIOSK is detached booth used as a medical dispenser which is utilized for checking in patients for appointments and record management. It also helps the doctors to make distance-surgery via highly embedded optical fibre lines with blooming 5G technology. Entirely, SHMS is used to emphasize the need of people especially in a rural areas to be beneficial and spark the ignorance and light-up the proper medication by reducing self-medication and death rates..

## **Integration of Hadoop and IOT for better analytics**

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### ***Abstract:--***

The new trend in the research and real time applications is Internet of Things (IOT). The functional benefits of IOT are ranging from smart house to smart cities. The main purpose of IOT is to integrate various devices logically and interacting between the devices without human intervention. The current discussion mainly focuses on leveraging the capacity of analytics in IOT and resolves the storage issues of the bulk data generated by IOT.

The proposed idea gives the usage of Hadoop platform to store the data and from that data performing analytics for the sake of better utilization of IOT communications.

The importance is explained with some real time scenarios where there is perfect blend of Hadoop platform and IOT. To store the various categories of the data Hadoop Distributed File System (HDFS) can be used, and to ingest the data from external platforms we can make use of Sqoop or Flume.

The data available in HDFS can be used to process with the usage of Map Reduce (MR) technique. Once the data is available in HDFS the analytics can be performed with Hive, Pig or R in the context of Machine learning or data mining techniques.

The outcome of the proposed idea is integration of Hadoop and IOT platforms with a unified frame work which accommodates the integration of Hadoop and IOT, storage provisions to handle bulk data, processing of the stored data and applying analytics so as to effectively serve various stake holders.

### ***Keywords:***

Hadoop, IOT, Analytics, Storage, Map Reduce.

## **Data Mining: Random Swapping based Data Perturbation Technique for Privacy Preserving in Data Mining**

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***Abstract:--***

Data mining is a process of collecting unknown data from different data sources and such data are very much useful for various decision-making Processes. Data mining process utilizes such sensitive information for analysing purpose but, privacy preservation of such sensitive data is very much important in every data mining applications. For Example, in-patient Health records some of the sensitive attributes like PID, Age, and Disease Name should not be disclosed to the third party which will lead to privacy violation of the individuals. Hence, a new model should be designed to preserve the privacy of such Sensitive data before it make publicly available. In this paper, an accurate and efficient PPDM (Privacy Preserving Data Mining) technique is implemented in order to preserve the private information about individuals. In the Existing System, traditional Geometric data perturbation (Gaussian Noise Based) technique preserved the individual privacy with some information loss. In the Proposed Paper, an efficient and effective Random Swapping based data perturbation technique is proposed which is mainly focuses on preserving the sensitive attributes and also attaining accurate classification results with minimum Information loss. In Proposed Framework, the accuracy, error rates is compared with a Naïve Bayes classification algorithm and J48 decision tree Algorithm and results are analysed using Weka 3.8 tool. Proposed Random Swapping Based perturbation technique improved the Accuracy and reduced the error rates with minimum information loss with compared to the existing system.

***Key Terms:***

Data Mining, Privacy Preserving, Data Perturbation, Random Swapping, Naive Bayes Classification, J48 decision tree, Geometric Data Perturbation.

## **Statistical methods in the usage of Correlation and regression analysis of the Machine Learning Models**

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**Dr.K.UmaPavanKumar**, Associate Professor, CSE, Malla Reddy Institute of Technology,

### ***Abstract:--***

The predictive analytics is the most commonly used methodology in the usage of Machine Learning class of algorithms. Based on the values generated at the time of running the algorithm the significance of the model can be estimated. The current work gives a complete focus on P value and the significance levels of the P value in the correlation analysis of the algorithms. Based on the P value the impact of the model can be notified and the interpretation of the results can be done in the efficient way.

The other dimension of the work is the usage of statistical functionalities in the regression analysis, most of the researchers are focusing on the shallow usage of regression analysis in the classification of the tasks. The current work explains the complete internals of the regression models available and the usage of the statistical functionalities utilized in the implementation of the corresponding variants of the algorithms.

We believe that the current work exclusively helps the upcoming researcher in the areas of regression in the context of the statistical functionalities which are vital in the implementation of the tasks. The outcome of the work is to exploit the correlation analysis with various significance levels and the issues in the processing of the analysis. The another point here is the regression internals with the focus of statistical methods available in the processing of regression variants.

The regression analysis involve various types like linear regression, multiple regression and logistic regression. The current work gives a overview of all these three types of regressions and also the significance of P value in the prediction of outcome.

In the examples such as house rate prediction based on the given area, salary of an employee based on the experience level, profit of the start-up companies based on the spending on research, admin marketing and state of the country are best suitable in the explanation of regression.

### ***Keywords:***

Regression, statistical methods, P-Value, Correlation.

## Frequently Used Classification Algorithms in Machine Learning With Comparative Analysis of Various Parameters

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### **Abstract:--**

Machine Learning(ML) is a new trend in the current industry and research, the algorithms which are relevant to supervised learning are more accurate and faster to predict the results of the huge datasets. The popular algorithms in supervised learning are classification algorithms.

Classification is a process of setting up the boundary conditions to predict the target class and provides a classifier so as to determine the possible outcome based on the independent variables. For example, in the allocation of the flats to the customers based on the salary range of the customer, type of the locality(urban, semi-urban), previous customer of the company to predict the outcome the best method is applicability of classification techniques. The most frequently used classification techniques in the literature of ML are Logistic Regression, Decision Trees, Random forest, Naïve Bayes classifiers, K-nearest neighbour , Support Vector Machine(SVM) and Neural networks.

Logistic Regression helps us to predict house prices in the specified area can be implemented, with the help of decision trees the prediction of the situations like whether the play is going to happened or not based on weather conditions. Random forest helps us to generate various decision trees so as to get the better reviews to decide to view a movie or not.

Based on the diabetes data set with different parameters the prediction of diabetes can be done, Support Vector Machine gives various dimensions in the space for better predictions. The Neural Networks allows the simulation of brain functionality with algorithmic perspective.

The current work focus on the importance of the classification algorithms along with the implementation and comparative analysis, the outcome of the work is to estimate the efficiency of the algorithms on the various data sets. The work also focus on issues and research gaps and future scope of the classification algorithms in the real time scenarios.

### **Keywords:**

Machine learning, Classification, Classifier, Random Forest, Neural Networks

## Stress Detection Based On Multimodal Data Using Machine Learning Techniques

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**Ms.Pissay Yaraswani Bai**, M.tech IInd year, G. Narayanamma Institute of Technology and Science (For Women), Shaikpet, Hyderabad

**Dr.A.Sharada**, Professor, G. Narayanamma Institute of Technology and Science (For Women), Shaikpet, Hyderabad

**Dr.M.Seetha**, Professor and Head, G. Narayanamma Institute of Technology and Science (For Women), Shaikpet, Hyderabad

### **Abstract:--**

Stress affects everyone differently but it can lead to a variety of health issues. Early detection of stress can prevent many stress-related health problems. Physiological stress can be identified by basic parameters like heart rate, pulse rate, face recognition, respiratory signals, which provide detailed information about the person state of mind. These parameters vary from person to person on the basis of certain things such as their body condition, age, and gender.

Physiological sensor analytics is becoming an important tool to monitor health. Physiological multi-sensor studies have been conducted previously to detect stress. This paper focuses on features like respiration rate, pulse rate and facial expressions that can now be performed with Microsoft Kinect Xbox 360 sensor, Pulse sensor and Camera, to develop an efficient and robust mechanism for accurate stress identification. Using machine learning algorithms on the above features high accuracy in detecting the stress can be achieved.

### **Key Terms:**

Physiological stress, Physiological multi-sensor, Microsoft Kinect Xbox 360 sensor, Pulse sensor



## A Literature Survey on Dual Authentication and Key Management Techniques for Secure Data Transmission in Vehicular AD Hoc Networks

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**Prof Dr.R.Ravichandran**, Research Guide & Director, Department of Computer Science, KG College of Arts and Science,  
Coimbatore, Tamil Nadu, India

### **Abstract:--**

Vehicular ad hoc networks (VANETs) are an important communication paradigm in modern-day mobile computing for exchanging live messages regarding traffic congestion, weather conditions, road conditions, and targeted location-based advertisements to improve the driving comfort. In such environments, security and intelligent decision making are two important challenges needed to be addressed. In this paper, a trusted authority (TA) is designed to provide a variety of online premium services to customers through VANETs. Therefore, it is important to maintain the confidentiality and authentication of messages exchanged between the TA and the VANET nodes. Hence, we address the security problem by focusing on the scenario where the TA classifies the users into primary, secondary, and unauthorized users. In this paper, first, we present a dual authentication scheme to provide a high level of security in the vehicle side to effectively prevent the unauthorized vehicles entering into the VANET. Second, we propose a dual group key management scheme to efficiently distribute a group key to a group of users and to update such group keys during the users' join and leave operations. The major advantage of the proposed dual key management is that adding/revoking users in the VANET group can be performed in a computationally efficient manner by updating a small amount of information. The results of the proposed dual authentication and key management scheme are computationally efficient compared with all other existing schemes discussed in literature, and the results are promising.

### **Key Terms:**

Vehicular Adhoc network, Trusted Authority, Primary User, dual key

## Real-Time Economic Dispatch by accommodating implications of Uncertain Renewable Energy Resources

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**Anil Swarnkar**, Department of Electrical Engineering, Malaviya National Institute of Technology, Jaipur, India

### *Abstract:--*

The integration of considerable renewable energy resources in power grids has imposed high variability in the net load demand to be seen by conventional generating stations. The real-time economic dispatch (RTED) of modern power systems must consider minute-to-minute variability in the net load demand on the station during a scheduling interval of 5-15 min. The existing methods therefore may not explicitly handle economic implications of power system. This paper proposes a new method for RTED while fully addressing variability in power generation from renewable energy resources and load demand. The method suggests mean PFs for committed generators by conducting (off-line) economic dispatch for each subinterval of 1 min. Mean PFs are evaluated only once, that is just at the beginning of scheduling interval and will continued throughout the interval. This reduces complexity and dimensionality of the proposed method. The simulation results on a standard test bench validate economic competence of proposed approach over that conventional one.

### *Key Terms:*

Real-time economic dispatch, mean participation factor, scheduling interval, renewable energy resources

## **Economic Dispatch of Thermal Units: A Comparison of PSO and JAYA Algorithms**

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**Anil Swarnkar**, Department of Electrical Engineering, Malaviya National Institute of Technology, Jaipur, India

### ***Abstract:--***

Economic load dispatch (ELD) problem becomes highly complex combinatorial exercise on account of satisfying various operational constraints pertaining to generator and transmission network. The introduction of non-convexity and discreteness in the fuel cost function owing to generator constraints has shifted the focus of researchers towards metaheuristic techniques while solving ELD problem. Metaheuristic techniques, however, usually suffer from hectic tuning of control parameters. Recently, JAYA algorithm is developed which is being free from control parameters. JAYA algorithm is derived from particle swarm optimization (PSO) which needs parameter tuning. Therefore, this paper presents a comparative study about PSO and JAYA algorithm when applied to solve multi-constrained hard combinatorial ELD problem. PSO and JAYA algorithms are investigated on a well-known large-scale optimization ELD problem of 40 generator test generating system. The results of study are presented.

### ***Key Terms:***

Economic load dispatch, fuel cost minimization, JAYA algorithm, particle swarm optimization

## **A Competent Model for Security and Privacy in IoT using Fog Computing**

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### ***Abstract:--***

The internet of things (IoT) defines the objective of day to day physical objects that are connected to the internet and being able to identify themselves to other devices. Today, Internet of Things is a platform where changes occur every day as devices become smarter, processing becomes intelligent, and communication becomes informative. Due to high demand on IoT applications, the typical integrated cloud computing paradigm faces several challenges such as network failure, low capacity, high latency and poor security. In order to address these challenges, fog computing brings the cloud closer to IoT devices. Fog computing is an encouraging prototype that extends cloud computing to the edge of networks. The fog provides data processing and storage locally at IoT devices instead of sending them to the cloud. In contrast to the cloud, the fog provides services with faster response and better security. This paper presents the art of fog computing and its integration with the IoT by highlighting the benefits and implementation challenges. We also focus on the architecture of the fog and emerging IoT applications that will be improved by using the fog model.

### ***Key Terms:***

Internet of Things, Fog Computing, IoT Devices, Cloud Computing.

## **Multicast Routing Protocols in Mobile Ad Hoc Networks: Issues, Challenges and Applications**

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**Dr.A.Rama Mohan Reddy**, SVUCE, Tirupati

**Dr. M.Seetha** , GNITS, Hyderabad

### ***Abstract:--***

Mobile Ad hoc Networks (MANETs) are self-configuring, de-centralized and a kind of multi hop wireless packet networks, where the mobile gadgets (also referred to as nodes) communicate with each other on wireless links. Such networks find applications where a quick deployment or dynamic reconfiguration of network is required, or there is no pre-existing network infrastructure or wired network is available. The applications include emergency search and rescue operations, military, civilian operations, law enforcement, and conferences. Multicasting is becoming important in MANETs as a lot of applications relying on cooperation among a team. There have been a wide variety of multicast routing protocols available in the literature. This paper outlines the multicasting, various multicast routing protocols and their performance evaluation metrics.

### ***Key Terms:***

Mobile Ad hoc Network, Multicast, Routing, Scalability, Efficiency.

*Organized by:*

**G Narayanamma Institute of Technology & Science for Women (GNITS)**

*and*

**Institute For Engineering Research and Publication (IFERP)**

## Integrated Buck Boost Series Parallel Fly-Back Converter for Electronic Ballast and LED Drive Applications

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**Pandu Kumar K**, Asst. Prof. GNITS/EEE, Hyderabad, India.

**Sravan kumar S L V**, Asst. Prof. GNITS/EEE, Hyderabad, India.

**Lokeswararao K**, Asst. Prof. School of Tech. GITAM, Bangalore Campus, India.

### **Abstract:--**

Integrated Buck Boost Series Parallel Fly-Back Converter (IBBSPFC) a single MOSFET Switch is used. This IBBSPFC can achieve high or low voltages by buck and boost process. The pass through a filter capacitances be able to be low thus to facilitate film capacitor can be used. Buck-boost converter can operate in Buck mode and Boost mode with continuous conduction mode by the inductor and capacitors. In this design, regulation and reliability of the converter improves when the capacitors are linked in series among the main winding of isolation transformer and the power transfer capability is improved by parallel connection of the isolation transformer with capacitor. By this IBBSPFC can increase and decrease of volt conversion without any transformer losses is obtained for different duty cycles. Therefore, this is beneficial for higher efficiency and reliability and the cost of the System can be reduced by using Fast recovery diodes, inductor and capacitors. By Conversion of 24V input to 50VOutput in continuous conduction mode (CCM) under 100W output power is obtained.

### **Keywords:**

Integrated Buck Boost Series Parallel Fly- back Converter (IBBSPFC), Isolation Transformer, Continuous Conduction Mode (CCM), Open Loop Control, Buck-Boost Converter (BBC), Fly-back Converter (FC).

## **A Framework for Securing User's Location in CRN's by developing LPDB and LPDBQS**

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**M. Sridevi**, Assistant Professor, G. Narayanamma Institute of Technology and Science, Hyderabad.

***Abstract:--***

Cognitive radio networks (CRNs) Become a promising answer for overcoming the lack along with ineffective make use of bandwidth sources by means of permitting secondary user (SUs) to get right of entry to the primary users' (PUs) channels so long as they do not intervene with them. Despite its significance, the location privateness trouble in CRN s simplest recently won interest from the research network. Some works centered on addressing this difficulty in the context of collaborative spectrum sensing while others targeted on addressing it inside the context of dynamic spectrum auction. However, those works did no longer focused on the place privacy of the customers. within term paper, we suggest location privateness-preserving schemes for database-pushed CRNs. The first scheme, location privateness in database-driven CRNs (LPDB), provides finest place privateness to SUs within DB's coverage place by means of leveraging set club statistics structures (used to test whether or not an detail is a member of a hard and fast) to construct a compact version of DB. The second scheme, LPDB with servers (LPDBQS), minimizes the overhead at SU's side at the fee of deploying an extra the network.

***Keywords:***

Networking, Cognitive Radio Networks, Database, Data Structure

## **Verb Based Sentiment Analysis**

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**P. Preethi Krishna**, CSE Department, G. Narayanamma Institute of Technology & Science, Hyderabad, Telangana

***Abstract:--***

Sentiment Analysis is one of the leading research work. This paper proposes a model for the description of verbs that provide a structure for developing sentiment analysis. The verbs are very significant language elements and they receive the attention of linguistic researchers. The text is processed for parts-of-speech tagging (POS tagging). With the help of POS tagger, the verbs from each sentence are extracted to show the difference in sentiment analysis values. The work includes performing parts-of-speech tagging to obtain verb words and implement TextBlob and VADER to find the semantic orientation to mine the opinion from the movie review. We achieved interesting results, which were assessed effectively for accuracy by considering with and without verb form words. The findings show that concerning verb words accuracy increases along with emotion words. This introduces a new strategy to classify online reviews using components of algorithms for parts-of-speech.

***Keywords:***

Parts-of-speech (POS) Tagging, verb words, TextBlob and VADER



## Implementation of Machine Learning In Air Line Data

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**B. Vimala devi**, I MSc Data Analytics, Department of Computer Science(PG) , PSGR Krishnammal College for Women, Coimbatore, India

**S. Gomathi**, Assistant Professor, Department of Computer Science(PG), PSGR Krishnammal College for Women, Coimbatore, India

### *Abstract:--*

The main objective of the paper is to implement classification and clustering algorithm such as Naive Bayes, K-Means, and Farthest First clustering algorithm using Weka to analyse airline dataset. In addition to that, performance analysis of these algorithms shows that Farthest First outperforms the other algorithms. Data set has been obtained from UCI machine learning repository. The algorithms has been discussed with the results obtained from the tool. The confusion matrix for classification algorithm and the cluster instances for clustering algorithm is also shown in the result.

## Detour Domination Number of More Graphs

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**Abstract:--**

Let  $G = (V, E)$  be any graph. A subset  $S \subseteq V(G)$  is said to be a detour dominating set of  $G$  if  $S$  is a detour and dominating set of  $G$ . This paper finds the detour domination number of some special graphs obtained as sum of two graphs  $C_n \odot C_m$ . Also the detour domination number of Middle graphs and Inflated graphs are obtained. Further, characterizes graphs with particular values for detour domination numbers.

**Keywords:**

Detour, Detour domination, Detour domination number.

AMS Subject Classification: 05C78.

## Applications of Public Key Cryptography and Functioning Process

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**Abstract:--**

In cryptography, public key cryptography plays an important role to communicate sensitive information in online payment or any other electronic transactions securely. This paper illustrates the major applications of public key cryptography and their functioning process. The real time applications of public key cryptography are also included here.

**Keywords:**

Public key cryptography, Encryption, Digital signature, Certificate, Authentication, Confidentiality, Non-repudiation.

# **Two Stage Solar Photovoltaic Energy Conversion System Using Adaptive Neuro -Fuzzy Interface System MPPT**

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**K.Vimala Kumar** , Assistant Professor, Department of Electrical Engineering , JNTUA College of Engineering, Pulivendula

***Abstract:--***

Energy that can be obtained from photo voltaic is a natural energy source and it has main advantage of environmental sustainment, inexhaustibility. This paper presents solar energy conversion system implementing with ANFIS technique to deliver maximum power to the load at any time. ANFIS based MPPT offers the benefits of both fuzzy and neural network. The proposed ANFIS MPPT provides faster response for dynamic stability under environment changing conditions. The proposed system is executed on MATLAB Simulink and the results are checked under changing environmental conditions. The major outcomes of this model include increased power output to the grid making it easier for power transmission and reducing the distortions in the tracking maximum power.

***Keywords:***

Adaptive neuro –fuzzy interface system (ANFIS), MPPT, Grid, Power quality.

## Principal Component Analysis and Correlation Analysis on Wisconsin Breast Cancer Dataset

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**Dr. B. Vijaya Babu**, Professor, Dept. of CSE, KLEF, Guntur

**Abstract:--**

Breast cancer is a completely serious malignant tumor originating from the breast cells. The disease occurs typically in women, but additionally men can rarely have it. During the prognosis of breast cancer, odd growth of cells in breast takes vicinity and this increase may be in two sorts which are benign (non-cancerous) and malignant (cancerous). IBM SPSS Statistics 16, Access 2003 and Excel 2003 were used in the data preparation and IBM SPSS Modeler 14.2 was used to calculate Principal Component Analysis to find the adequacy of the dataset attributes for the prediction of the nature of Breast Cancer Disease. Further correlation analysis is also taken up to figure the dependencies among attributes. The paper focus on the foresaid experimentation and the results are justified to generated the appropriate and the sufficiency of the attributes for the prediction.

**Keywords:**

Breast Cancer, Correlation analysis, IBM SPSS, Principal Component Analysis.

## Energy-Saving Vector Based Forwarding for Underwater Wireless Sensor Network (UWSN)

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**Dr.P.Sengottuvelan**, Associate Professor, Department of computer science, Periyar University PG Extension Centre, Dharmapuri, Tamilnadu, India.

**Abstract:--**

Underwater Wireless Sensor Network (UWSN) is the real research territory for specialists because of its adaptable applications like: strategic observation, seismic checking, helped routes, contamination checking, and a lot increasingly logical based applications. Lion's share quantities of analysts have presented the directing conventions dependent on hub portability yet at the same time research needs improvement to plan the proficient steering conventions which control the hub development. This article centers the steering conventions based on hub versatility with its grouping like: vector based, profundity based, bunched based, AUV based, and way based. In characterization the real spotlight is on sending, hub versatility, information sending, course revelation, and course support. The article likewise centers the current issues in the portability based steering conventions. We have presented two examination techniques one is explanatory strategy and other is numerical recreation technique. In logical technique we have thought about the proposed steering conventions through structural parameters and execution qualities parameters.

**Keywords:**

Underwater Wireless Sensor Network (UWSN), node mobility, data forwarding, route discovery.

## **A Report on Designing of Wireless Sensor Networks for IoT Applications**

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**S. Srinivas**, Assistant Professor, Dept. of ECE, S R Engineering College

**E. Ramesh**, Assistant Professor, Dept. of BM, S R Engineering College

### ***Abstract:--***

Internet of things is defined in many ways is an internet technology connected to devices, machines and tools by the means of wireless technology, such as connected homes, cities, cars and roads, etc. The IoT is the platform to connect physical objects that contain built-in technology to interact and sends or communicate with their internal blocks or external environment. Nearly one trillion devices are internet connected devices which are available with mobile applications, linking all these connected things. Billions of devices are being communicated all the way though out the world over network protocols, in 2010 which was made by an IoT. Daily around 12.5 billion things or devices are interacting with internet. Since past two decades many researchers and industries were attracted towards IoT because of its reliability. If domestic appliances like Oven, Refrigerator, Air conditioner, Geezer, Smart TV are connected in a network, they all work together in association to provide an ideal service as an entire, not as a collection of independently working devices. IoT is a powerful tool which is used in many ways in the development of real-world applications and services, for example building a smart residence where light should ON when the person enters into the room at night time, windows can be closed automatically when it rains, and automatically windows will be open if any leakage of gas. Wireless Sensor Networks are included into the “Internet of Things”, where sensor nodes are connected to the Internet vigorously, and use it to act as a team and complete their action. Wireless Sensor Networks are well apt for long-term environmental data acuirement for IoT representation. In this paper, we provide the information on designing challenges on wireless sensor networks for an IoT application.. This paper presents an overview on an IoT, functional design of WSN for IoT application, details an architecture of IoT and related key issues.

### ***Keywords:***

Energy efficiency, IoT, IoT Application, Sensor Node, Privacy, Security, Wireless Sensor Network.

## Adapting Best Path for Mobile Robot by Predicting Obstacle Size

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**Sallauddin MD**, Computer Science & Engineering, S R Engineering College, Warangal, India

**Syed Nawaz Pasha**, Computer Science & Engineering, S R Engineering College, Warangal, India

**A. Harshavardhan**, Computer Science & Engineering, S R Engineering College, Warangal, India

**P.Kumarawamy**, Computer Science & Engineering, S R Engineering College, Warangal, India

### **Abstract:--**

In this paper we are proposing an approach to find obstacle size to reduce the searching area for path planning for mobile robot. With this approach, the vehicle is able to reduce searching area compare to other algorithms. This is main problem normally all the algorithms were concentrate how to optimal path but without reducing searching area it's not possible. The approach we use in our model consists of various kinds of obstacles such as motor cycles, pedestrians, animals, etc. The presence of and the appropriate path is planned according to the dimensions of the obstacle as different obstacles have different dimensions.

### **Keywords:**

Optimal Path, Varying Obstacle, Dynamic Environment



## **Evaluating the Performance of Spice Framework Using Trace-Driven Emulations on Smartphone's**

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**M. Sridevi**, Associate Professor, G. Narayanamma Institute of Technology and Science, Hyderabad.

***Abstract:--***

portable online social networks (OSNs) be rising because the famous conventional policy intended for data as well as contented distribution amongst populace. within arrange toward grant the first-rate of knowledge guide for cell OSN examine, on this term paper, we suggest a socially-driven learning-primarily based structure, specifically Spice, intended for the media content material prefetching toward decrease the get right of entry to postpone as well as improve cellular consumer's pride. Throughout a huge scale facts-pushed evaluation in excess of real-life mobile Twitter strains from over 17 000 customers throughout a phase of 5 months, we display that the social friendship have a high-quality brunt on consumer's medium material click on conduct. Toward imprison this impact, we behavior the social friendship cluster in excess of the position of consumer's associates, after that expand a cluster-base completely dormant Bias form for socially driven getting to knowledge base prefetching forecast. We afterward plan a practice adaptive prefetching setting up method by using captivating keen on report that one of kind users might additionally acquire various patterns within the mobile OSN app utilization. We expansively estimate the overall performance of Spice structure use trace determined emulations going on smart phones. Assessment outcomes support that the Spice be able to acquire greater overall performance, among a mean 80.6% get admission to put off reduction at the less value of mobile records as well as power expenditure. In addition, by means of enabling customers to dump their device gaining knowledge of procedures to a cloud server, our layout is able to gain as much as an aspect of a thousand velocity-up over the local facts training execution on smart phones.

***Keywords:***

Mobile Computing, Online Social Networks, Quality of Experience, Spice Structure

## Detecting Aspect Categories by Using NLP for Online Review Summarization

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**Ms. T. Aparna**, Assistant Professor, Department of Information Technology, GNITS, Telangana, India

**Abstract:--**

Using on the web customer overviews as electronic verbal trade to help purchase fundamental authority has ended up being continuously common. The Web gives an expansive wellspring of customer reviews; anyway one can hardly peruse all overviews to get a sensible appraisal of a thing or organization. A substance planning framework that can gather reviews would henceforth be alluring. A subtask to be performed by such a structure is find the general point classes would in general in overview sentences, for which this paper presents two strategies. Rather than most existing procedures, the vital system displayed is an unsupervised strategy that applies association control mining on co-occurrence repeat data obtained from a corpus to find these point arrangements. While not practically identical to top tier coordinated methodologies, the proposed unsupervised methodology performs better than a couple of direct baselines, a similar anyway regulated procedure, and an oversight standard, with a F1-score of 67%. The second procedure is a managed variety that beats existing methodologies with a F1-score of 84%.

**Keywords:**

Aspect category detection, consumer reviews, co-occurrence data, sentiment analysis, spreading activation

## A Novel Technique for Extracting Radar Signal

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**Dr. Niranjan prasad**, scientist ,DLRL

### **Abstract:--**

In order to safe guard the country electronic war fare circuits and algorithms are installed in different platforms.many signal processing techniques are used along with analog and digital systems. This paper involves a novel algorithm for extracting the radar signal. Different modulation technioques, inter and intra pulse modulation techniques are used for extracting the radar signal. Linear frequency modulation –up chirp,chirp-down are the characteristics of the inter pulse, baker codes intra pulse characteristics include stagger and jitter. The inter pulse characteristics include linear frequency modulation-up chirp, down chirp, Baker codes intra pulse characteristics include stagger and jitter. The various digital signal processors and signal processing techniques are used to extract the radar parameters, development of software in MATLAB and simulation in System.. The developed hardware and software has to be tested and verify for the input signal parameters that are generated by radar simulator using software called IP Analysis Tool. The entire work is carried out simulation mode, before verifying on the target PCB.

### **Keywords:**

Inter pulse, Intra pulse, Barker, LFM, Stagger, Jitter

## **Implementation of Big Data Analysis on Population Growth in Government Sector**

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**S. Akshaya**, IMSc DA, Department of computer Science (PG), PSGR Krishnammal College for Women, Coimbatore, India

**G. Anitha**, Assistant Professor, Department of computer Science (PG), PSGR Krishnammal College for Women, Coimbatore, India

***Abstract:--***

In this paper we are going to predict the population growth of India for the year 2021. This journal is a kind of survey that makes predictions of the population in 2021 using the available big data. Also, the paper has incorporated various data preparation, survey and also has some critical applications for government sector. In general, the census survey in India is taken in a period of once in 10 years, so this journal aims to predict the population approximately on the basis of big data, well in advance of the government survey.

## Conceptual FOG based Architecture for Monitoring and Acceleration of Bone Fracture

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**Dr.Raju Anitha**, Associate Professor, Department of Computer Science, KLU, Guntur

**Dr. CSR Prabhu**, Director Research of KMIT, HYD

### *Abstract:--*

In the backdrop of an emerging scenario marked by a predominantly older populace, burgeoning costs of living amidst depleting resources, Cloud computing and IoT offer a ray of hope, particularly while developing e-Health system, with patient at the core of the healthcare pyramid. Telemedicine is a novel application that offers healthcare services such as diagnosis, consultation as well as treatment that reaches the most efficient levels with introduction of smart healthcare solutions. Nonetheless, IoT-driven healthcare requires to conquer multiple hurdles like complexities in data storage on cloud servers, security and privacy aspects, prohibitively high expenses incurred on perpetual data accumulation, other than energy-efficiency challenges and maintenance of sensors based out of cloud servers. In this paper, the primary focus is on devising a novel construct around the concept, Fog computing, particularly from the point of view of Tele medical IoT. As is commonly understood, Fog computing as a prototype allows cloud computing services to reach the periphery of a network. In a manner identical to cloud, Fog enables end users to receive data, computation, storage, and application services. As a case study, in this paper, an attempt has been made to develop a service- oriented architecture that monitors and accelerates healing in cases of bone fracture applying fog computing. In fact, , this architecture applies a sensing module on an energy-efficient embedded computer to perform data mining and data analytics operation on raw data that is sourced from sensing modules utilized in such telehealth operations. This embedded computer system assembles such sensed data in a time series before analyzing and discovering the identical patterns, which later stores, extracts novel patterns as well as transmits clinically-suitable data via network to the cloud based in a hospital.

### *Index Terms*

Cloud Computing, Fog Computing, IoT, Telemedicine

## Sentiment Analysis for Stress Detection using Machine Learning Algorithms

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**S.S.S.Lakshmi Devi**, Department of Computer Engineering G Narayanamma Institute of Technology & Science for Women  
(Autonomous) Affiliated to JNTUH

### *Abstract:--*

Stress has a serious effect on mental health and is often a precursor for many severe conditions. Although stress is a natural stimulant, persistent increased levels yield many health issues like anxiety, depression, hypertension, heart attacks etc. Its prevalence has been increasing rapidly since past decade. The cure of stress requires it to be detected and quantized into levels first. As many of the social interactions are done through exchange of textual information stress can be effectively detected using sentiment analysis.

In order to handle stress-related textual attributes from various aspects and to be context specific the proposed method build a dictionary of all stress related words to detect direct and indirect expression of stress in textual information. Stress can be detected easily depending on the context and presence of these stress related terms. Sentiment relating to stress is obtained by using supervised learning techniques like Naïve Bayes, Multinomial Naïve Bayes and SVM algorithms. These three algorithms are compared based on accuracy. SVM algorithm and Multinomial-Naïve Bayes algorithms showed better performance than Naïve Bayes algorithm. Thus it can be ascertained that proposed system accurately detect the sentiment relating to stress.

### *Index Terms*

Multinomial Naïve Bayes, Naïve Bayes, Stress detection, SVM (Support Vector machine)

## Urban Sound Feature Extraction and Classification

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**Ms. Afshan Kaleem**, Asst Prof, MuffakhamJah College of Engineering and Technology, Hyderabad, India

***Abstract:--***

Machine learning is a significant developing area for almost all researches today. Attaining knowledge from empirical data is the backbone of machine learning. The knowledge is derived by changing either structure or parameters of an algorithm model or both in order to bring an improvement in its expected performance on future data. These changes have been accommodated to accomplish one of artificial intelligence tasks which can be decision making, recognition, learning, diagnosis, prediction, control or planning, etc. Different approaches are used to learn from data such as SVM (Support Vector machine), Gaussian, Clustering, Bayesian network, Adaboost and Artificial Neural Network.

In this paper we will discuss learning from experimental data by using various models and their comparison study. I have used ESC-50 dataset and let us have a brief look at its recognition accuracy pattern with respect to various models.

## Microwave Band Pass Filter Design Realization in Microstrip Patch

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**T.Sarath Babu**, Assistant Professor, ECE Department, G.Pulla Reddy Engineering College (Autonomous), Kurnool, Andhra Pradesh (AP), India.

**B.Siva Reddy**, Assistant Professor, ECE Department, G.Pulla Reddy Engineering College (Autonomous), Kurnool, Andhra Pradesh (AP), India.

**M.V.R.Vittal**, Associate Professor, ECE Department, G.Pulla Reddy Engineering College (Autonomous), Kurnool, Andhra Pradesh (AP), India.

### **Abstract:--**

In this paper, a new band pass filter design and realization is proposed. The topology used is  $\pi$  - configuration of LC components and it is converted in to dielectric patch. FR4 dielectric material of dielectric constant 4.4 with thickness 1.6 mm and loss tangent value of 0.025 is selected to design the filter. IE3D EM simulator is used to realize the design in microstrip patch. The pass band of the filter ranges from 900 MHz to 2500 MHz. At the center frequency of 1500 MHz with 1600 MHz bandwidth is realized in microstrip patch. Third order butterworth band pass filter is arrived with -10 dB rejection at  $f_L$  and  $f_H$ . Insertion loss of <4 dB within  $f_L$ - $f_H$  band and return loss better than -10 dB within the pass band is achieved. Good frequency response characteristics of the filter are arrived during the design and simulation. The proposed design is useful for wireless radio communication systems.

### **Key words**

Band pass, filter, microstrip, microwave.



## Survey on New Network Architecture through SD- WAN

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**Dadi Ramesh**, Department of Computer Science & Engineering, S R Engineering College, Warangal, Telanagana State, India.

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**Shabana**, Department of Computer Science & Engineering, Sumathi Reddy Institute of Technology for Women, Warangal, Telanagana State, India.

**Kotha Shankar**, Systems Engineer, Tata Consultancy Services(TCS), HYD, India

### **Abstract:--**

Today society and many organizations use the internet which interconnects the people around the world. This internet uses the traditional Wide Area Network architecture. The traditional WAN requires a single provider to access many sites which does not allow the sites for direct access to cloud resources, inflexible and these are had unpredictable performance. To overcome these problems SD-WAN architecture introduced based on SDN technology. SD-WAN had dynamic multi-path selection and cloud optimized functionalities. These functionalities are providing improved performance and fault tolerance. The implementation of SD-WAN in inter autonomous systems with Cloud Computing allows virtualization on the network architecture with provisioning and de-provisioning of resources on demand, so it is becoming new era of service by Cloud Computing named as Network as a Service (NaaS). Recently the telecom services started the NaaS to their subscribers to avoid the more use of physical network. Due to present network traffic demands SD-WAN needs dynamic network controls, optimal path selections, Forward error controls and secure transmission. In this article we discuss about SD-WAN design issues, transmission control and possible integrated architecture. We also present the functional process of RESTful API on SD-WAN with program fragments

### **Key words**

SD-WAN, dynamic multi-path selection, Network as a Service, RESTful API

## Hyper Spectral Image Compression Using Fractal Compression with Arithmetic and Huffman Coding

**B.Sucharitha**, Assistant Professor MJ college of Engineering and Technology, Hyderabad.

**Sameera Ather**, Assistant Professor MJ college of Engineering and Technology, Hyderabad.

**Abstract:--**

hyper spectral (HS) image compression approaches achieved significant advances from diverse types of coding standards/approaches. HS image compression requires an unconventional coding technique because of its unique, multiple-dimensional structure. Compression of hyper spectral images is undertaken to reduce the on-board memory requirement, communication channel capacity and the download time. Compression algorithms can be either lossless or lossy. In hyper spectral image compression, wavelets have shown a good adaptability to a wide range of data. Some wavelet-based compression methods have been successfully used for hyper spectral image data. Fractal Image Compression is an approach for better image compression. The main objective of this method is to provide simple and better compression results, which is based on proposed Quad tree Decomposition and Discrete Wavelet Transform method for a hyper spectral image. Fractal image compression can be obtained by dividing the RGB image into un overlapped blocks depending on a quantization value and the well-known techniques of Quad tree decomposition. The experiments are conducted with HSI compression based on DWT, Fractal. The results of our work are found to be good in terms of Compression Ratio (CR) and Peak Signal-to-Noise Ratio (PSNR).

**Key words**

HSI, DWT, CR, PSNR

## **Different Channel Estimation Techniques Used In MIMO-OFDM Communication Systems-A Survey**

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**M.Vijaya Lakshmi**, P.G Student, Assistant Professor, Department of Electronics and Telematics, G. Narayanamma Institute of Technology and Sciences (for Women)

### ***Abstract:--***

Modern communication system is more fascinated about wireless communication, in which the data can be delivered wirelessly. Wireless communications, usually works through “Electromagnetic” (EM) waves by which the data is send by air, which acts a medium. But the medium or channel considered in wireless system changes over time i.e., it is time-varying in nature. Even the signals transmitted through wireless systems may get affected by multipath propagations. In realism, the status of channel is unknown. So, the “Channel Estimation” is very essential in wireless communications. Mostly the estimation of channel is carried out at the receiver end. Therefore to precisely estimate the channel various techniques are employed. The techniques like Least Square (LS), Minimum Mean Square Error (MMSE), blind and semi-blind, training based channel estimation methods. As the estimation is carried out at the receiver the pilot sequences are utilized by which the evaluation can be done with ease and accurately estimate the channel. In technologies like, OFDM, MIMO-OFDM this estimation plays a very crucial role as high data rate signals are transmitted through the subcarriers which are modulated and overlapped orthogonally with each other. The paper gives the introduction to OFDM and MIMO-OFDM systems and also briefs about different pilot allocation methods used for estimation and discusses about the channel estimation algorithms deployed in wireless communications.

### ***Key words***

Orthogonal Frequency Division Multiplexing (OFDM), Multiple Input Multiple Output (MIMO), Least Square (LS), Minimum Mean Square Error (MMSE), Electromagnetic (EM).

## A Novel Approach for Evaluation of Life Span of a Tire through Image Processing Technique

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**Dr. K. Chennakesava Reddy**, Research Supervisor, Dept. of ECE, JNTU Hyderabad, T.S., India

### **Abstract:--**

The tire component of a car is the only one which is in direct contact with the road. They become defective because of factors like driver's driving, wear out, pressure, overheating, wheel alignment. When the tire is worn, the threads shallow up and can cause the failure of the tires hence reducing safety. A new tire has the capacity of absorbing the heat whereas; the old tire does not absorb the heat and hence is prone to damages.

Gray level changes in the image of the tire before and after its surface deformation are found. These changes predict the life of the tire, "more the gray level changes lesser is the life span of the tire and vice-versa". These gray level changes can be found out by using "SVD"

The surface deformation of a tire is found by using SVD (Single value decomposition) with PCA(Principal component analysis) algorithm. PCA is used for the sake of Dimensionality Reduction. The principal components depending upon the variance of each training samples and the test samples help in the analysis of its life span. This paper proposes a robust image processing technique developed using the MatLab platform for nondestructive testing of a tire.

### **Key words**

SVD, PCA, surface deformation, non-destructive testing

## An Efficient Trust Computing Scheme for Implementing a Trustworthy and Collaborative Cloud Service

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### **Abstract:--**

The vital task of cloud computing programme is to provide trusted services to users. The user wants to deliver their critical tasks and information to cloud data centre. So that, the burden of the cloud customer is shifted to cloud data centre. Trust has a prime role between user and cloud service provider. There are many approaches available to calculate trust value in collaborative cloud computing. In the proposed system, to provide security, data uploaded to cloud will be in encrypted format. Parallel trust computing scheme will calculate the trust. A thread will be created for each user request and will be fast as it has to evaluate the trust for single user. Trust will be determined based on successful login, and response time. The response time calculated from each request is added to matrix window, from which we can predict and recommend the best performing cloud services to user. The experimental result support practicality and success of the proposed system.

### **Key words**

Trust, Security, Cloud Computing, Trust Value, Collaborative Cloud Computing, Response Time.

## **An Approach to Enhance the Old Manuscript Resolution Using Deep Learning Mechanism**

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**MD. Salauddin**, Computer Science & Engineering, S R Engineering College, Warangal, India

***Abstract:--***

In this paper we address the problem of enhancing the resolution of old manuscripts as these will deteriorate over time. The manuscripts are of at most importance as they may contain sensitive and important information. Hence digital processing techniques play a crucial role to improve the quality of the manuscripts. We propose a standard deep learning mechanism that is conventional neural network (CNN) to enhance image resolution which will help to increase resolution of old manuscript. It not only increases the resolution but also tries to identify missing content using digit recognizer. We also compare the efficiency of our approach with the existing image enhancing techniques.

***Key words***

Deep learning, conventional neural network, Image enhancement, digit recognizer.

## **Detection and Interception of Black hole attack with Justification using Anomaly based Intrusion detection system in MANETs**

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**Fahmina Taranum**, Computer Science and Engineering, M.J.C.E.T, Hyderabad, Telangana, India

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**Khaleel Ur Rahman khan**, Computer Science and Engineering, Ace Engineering college, Hyderabad, Telangana, India

### ***Abstract:--***

Mobile adhoc network, a derivative of the adhoc network is sensitive to heterogeneous forms of attacks in particular passive and active attacks. Black hole attack is one such continually prevailing threat in mobile adhoc networks (MANETs), where specific nodes operate spitefully in the course of data transmission. Throughout this work, we intend to present an effectual approach to detect and intercept this attack taking into account Dynamic MANET on-demand (DYMO) routing protocol. This work presupposes working in three modules- planting, detection and ultimately the interception against the black hole attack. An IDS is initiated on the notion of machine leaning using MATLAB software. A relative scrutiny of IDS grounded on classifiers like K-Nearest Neighbor, Support Vector Machine, Decision tree and neural network is also conducted to make it certain that the best feasible classifier is settled on for administering the IDS. The analysis of the put forward work is subsequently accomplished taking miscellaneous metrics covering packet drop rate, average transmission delay, Packet Delivery Ratio along with throughput.

### ***Key words***

Black hole attack, DYMO, Intrusion Detection system, MANETs

## **Advanced Blind Stick with Portable Camera for Label and Text Reading Using Raspberry PI**

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**P.Harshitha**, G.Narayanamma Institute of Technology and Science

**Varsha Jain**, G.Narayanamma Institute of Technology and Science

**K.Jigisha Reddy**, G.Narayanamma Institute of Technology and Science

***Abstract:--***

The project aims at designing a system for blind people to recognize the handheld objects or products using a camera while being able to avoid obstacles and also implementing a panic button. In this project we design and develop a system to find products or objects with voice announcements by using Raspberry Pi. We can also alert the user through voice alerts whenever he is close to the obstacle or when the stick comes in contact with water. The system also sends a message using GPS and GSM module of the blind person's location to the guardian whenever they press the panic button. To perform this task, the Raspberry Pi processor is programmed using embedded 'Python 3 Compiler'.



## Image Encryption and Decryption using Chaotic Bit level Pixel Permutation

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**Ch. Usha Kumari**, Department of ECE, GRIET, Hyderabad, India

**Swapna Raghunath**, Department of ECE, GNITS, Hyderabad, India

**Ankitha Rathi**, Department of ECE, GRIET, Hyderabad, India

### **Abstract:--**

Present day communication is tending towards the digital technologies for a faster, better and enhanced way of data transfer. The digital data transfer is an efficient way to spread the information which saves the time for the information exchange. Most of the data is transferred over the internet in the pictorial form rather than theoretical form to reduce the transfer time. Images are the best available pictorial way of data interpretation. The data transmitted over the internet are prone to security issues caused by internet hackers. In order to save the data from being exposed to unauthorized users, it is advisable to transfer the data, different from its original form. The process of changing the data in one form to another with the same information is referred as encryption and retrieving the information from its encrypted form is referred as decryption. Encryption and decryption are image processing techniques that help in efficient and secured data transfer over the internet. The paper illustrates an efficient method of encrypting and decrypting images using bit-level pixel permutation and pixel correlation techniques.

### **Keywords-**

Bitwise XOR Operation, Data Security, Decryption, Encryption, Pixel Correlation, Pixel Permutation.

## Mitigation of Harmonics for Residential Loads by Shunt Active Power Filter using SRF Theory

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**Gouthami Eragamreddy**, Assistant Professor, Department of Electrical and Electronics Engineering, G.Narayanamma Institute of Technology and Science, Hyderabad, India.

### **Abstract:--**

With the rapid increase of power electronic devices usage in industrial, commercial and residential purposes have led to deterioration of supply voltage and current waveforms which in turn causes power quality problems within the supply system. This paper discusses different nonlinear loads such as personal computer, fluorescent lamp, adjustable speed drive, uninterruptable power supply. In this paper modeling and simulation of various non linear loads is considered and a Shunt active power filter (SAPF) is introduced to mitigate harmonics in the distribution system. These non-linear loads are considered individually and they are taken as loads to the electrical distribution system and Total Harmonic Distortion (THD) are evaluated. The analysis of current harmonics for these loads is performed individually. Finally THD is analyzed by using all these loads combined. The dynamic model of the SAPF is developed in the MATLAB/SIMULINK environment.

### **Keywords-**

Shunt active power filter (SAPF), Power quality, Non-Linear Loads, Total harmonic distortion (THD).

## **Various Recommender Systems and Their Usage in the Domains of Mobile Based and Online Applications**

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**Dr.K.UmaPavanKumar**, Associate Professor,CSE, Malla Reddy Institute of Technology

**B.Priyanka**, Assistant Professor,CSE, Malla Reddy Institute of Technology

### ***Abstract:--***

The activities of the users are surrounded by online shopping, online content fetching and online payment of the various bills. The important point is in case of the online shopping with Amazon, Flipkart and many other online shopping sites provides some sort of intelligent assistance to the user. Based on the past history, based on the user profile. Such kind of the applications were named as recommender systems.

The most common categories of recommender systems involves, the collaborative filtering, content-based filtering, multi-criteria recommender systems, risk-aware recommender systems, mobile recommender systems and Hybrid recommender systems. The current work dealing with the process followed by the recommender systems along with various key factors embedded in the usage. The suggestions given by the application to the user depends on user profile, and content searched by the user and the collaboration of other products with the current product.

The work focus on the implementation algorithms existing in the process of recommender systems, the above listed categories of recommender systems follow certain key mechanisms depending on the user query. The work also deals with the performance aspects of the recommender systems in case of accuracy and reproducibility in recommender system research. Especially the mobile recommender systems there are certain limitations of region and accuracy of the results. Overall the outcome of the work is to describe the importance of the recommender systems and the internal mechanism followed by various recommender systems.

### ***Keywords-***

Recommender System, User Profiling, Collaborative Filtering, Mobile recommender system, Intelligent assistance.

## **A Survey on Interoperability Issues in Internet of Things at Application Layer**

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**Dr K. Sagar**, Professor Dept of CSE CBIT Hyderabad, India

***Abstract:--***

Now a days everyone is depending on smart things (smart computing devices) or devices to complete their task comfortably from anywhere. These smart things create a network to exchange information between them by following OSI/ISO (Open system interconnection) or TCP/IP protocol stack. The two protocol stacks have seven layers which are being used by smart things to communicate with each other through network. These seven layers perform different tasks by using different protocols at each level. For example, network layer has TCP and UDP protocols for segmentations and communications application layer has http, https and SNMP etc... Smart things communicate with each other either through connection or connection less communication mediums. Devices are various kind, some of them are operate on low-power and low-data rates. Some of them operate on high-power and high-data rates using strong Ethernet networks. Establishing communication among heterogeneous devices and software protocols is a challenging task. Smart things behave intelligently with help of internet, embedded sensors and actuators. Smart things have processing and network capabilities. These are the building blocks for Internet of Things (IoT). This paper summarizes all application layer protocols and interoperability issues.

***Keywords-***

OSI/ISO, TCP/IP, UDP, IoT, SNMP

## A Heuristic Recurrent Neural Network Load-balancing model (HRNNL) for OFDM-CRN

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**Dr. K.RamaLinga Reddy**, Professor & HOD ETM Department G.Narayanamma Institute of Technology and Science(for women) Hyderabad, India

### **Abstract:--**

Proportional fair resource allocation acts as a major role to stability the spectrum efficiency and fairness for Cognitive Orthogonal frequency division multiplexing network. The resource allocation and scheduling in traditional OFDM system need to know about channel condition. To aware of channel state in typical Cognitive-OFDM model produces more spectrum holes which it leads a Quality-of-Service issue due to the channel allocation and spectrum allocation errors. To minimize the error rate we proposed a Heuristic Recurrent Neural Network Load-balancing model (HRNNL) for OFDM-based Cognitive radio network model. The proposed model categorize the channel scheduling process by considering resource allocation and load. The proposed HRNNL employs a load optimization algorithm to optimize the channel status, based on the different traffic states the RNN model predict the spectrum allocation rate based on the channel and sub-channel status.

### **Keywords-**

CRN, OFDM, RNN, Heuristic, Spectrum

# **VGDRA: A Virtual Grid-Based Dynamic Routes Adjustment Scheme for Mobile Sink-Based Wireless Sensor Network**

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**G.Krishna Reddy**, Associate Professor,Dept.of ETM,G.Narayanamma instituteof technologyandscience,JNTUH,Hyderabad,India.

***Abstract:--***

In wireless sensor networks, nodes energy decadence can be managed by exploiting the sinks mobility. Due to the dynamic network topology caused by the sinks mobility, distribution of information to sink node is considered as a challenging task. In order to reduce energy consumption by nodes, nodes need to reconstruct their route to the latest location of mobile sink and that result in efficient data delivery. The main aim of this paper is to reduce reconstruct cost of the sensor nodes by maintaining minimal route to the latest location of sink node. In order to reduce energy consumption and route reconstruction cost, sets of communication rules are proposed .These rules governs route reconstruction process thereby requiring only few nodes to readjust their route to the latest location of mobile sink.

***Keywords-***

Route reconstruction cost, energy consumption, sink mobility, wireless sensor network.

## **Fuzzy Logic Controller for Three level- NPC Inverter to Modified DTC SVM of Induction Motor**

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**Dr.G.Ravindranath**, Prof EEE Dept , Matrusri Engg College Affiliated to O.U

***Abstract:--***

Soft switching devices gained importance recently in Industries to have variable speed control of Induction Motor. Various speed control techniques such as v/f control, scalar control and vector control have been proposed to control speed of Induction Motor. In recent advancements DTC-SVM of induction motor became fancy due to its simple structure in implementation, though two-level inverter suffers from disadvantages of flux and torque error. To eliminate above problem 3-Level NPC inverter with modified DTC-SVM is being implemented. In the proposed method sector identification for the space vector is eliminated, and becomes simpler in implementation. Design of PI controller becomes difficult where parameter variations are observed. To avoid this problem Fuzzy logic controller is used. The above approach is simulated in MATLAB/SIMULINK and results obtained are satisfactory

## Comparative Analysis of LEEAR, AFDP and ARPASC Routing Protocols in MANETs

**A.Naveena**, Assistant Professor, ETM, G Narayanamma Institute of Technology and Science for Women, Hyderabad, Telangana

**Dr. K.RamaLinga Reddy**, Professor, HOD, ETM dept, G Narayanamma Institute of Technology and Science for Women, Hyderabad, Telangana

### **Abstract:--**

The recent development made in mobile technologies has demanding increase of secured networks in real-time applications. Security is more significant in Mobile Adhoc Network than in wired environment. When two or more different attackers collaborate together to interrupt the network performance it results in collaborative attacks. Due to lack of resources and centralized authority, these collaborative attacks have to be handled effectively. Prior security protocols may not be appropriate or may compromise the Network performance. In this paper three proposed techniques: hybrid security protocol for detecting malicious nodes, distributed anonymity fault diagnosis protocol and Adaptive risk prediction protocol are compared. The performance of proposed secured routing protocols is evaluated through simulations using Network simulator 2.35. The performance metrics are evaluated in terms of Packet Delivery Ratio (PDR), End-to-End delay, Throughput, Energy Consumption.

### **Keywords-**

Anonymity, Blackhole, Greyhole, Risk Evidence, Trapdoor, Zero Knowledge Proof.



## FACING THE CHALLENGES IN 5G USING DPA- MaIMaO ARCHITECTURE

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**Dr.I.Chandra**, Electronics and Communication Engineering, Saveetha School of Engineering, Chennai, India

**Ms.D.Subitha**, Electronics and Communication Engineering, Saveetha School of Engineering, Chennai, India

**Abstract:--**

To provide alternatives to problems in the design of User Equipment, an architecture that switches between cellular information and WiFi, a study was performed on present techniques in use and presented a cost-effective cellular-WiFi design methodology using Multiple Array of Antennas where the beam can be electronically guided. Detailed operation of how both Cellular data and WiFi changed simultaneously and utilized concurrently was examined.

**Keywords-**

User Equipment, Beamforming (BF), Massive MIMO, WiGig

## **Design and Implementation of GPS Based Medical Services Using Drone**

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**V. Arun**, Associate Professor, Department of ECE, MLR Institute of Technology

**SVS. Prasad**, Professor, Department of ECE, MLR Institute of Technology

### ***Abstract:--***

This paper is aimed to provide medical assistance to people through the delivery of medical supplies by unmanned drones. The use of unmanned drones' benefits people in distant areas around the world. The paper gives attention to the design of a biocompatible payload and a drone to accomplish medical supply delivery. Design of the drone healthcare delivery network is facilitating structured and low-cost delivery of healthcare to save lives.

Drones are capable of sustainable flight, which need not human presence on board, and have enough control for performing necessary functions. This paper utilizes a range of hardware components and software platforms that were integrated into the overall design of the medical drone. Hardware components include IMU enabled GPS, ArduCopter 2.6 Flight Controller, Data Transmission and Receiving module, Electronic Speed Control Circuits, DC Motors, Propellers, LiPo battery, Servo Connectors. GPS is used for navigation in between ground stations that are automated, to deliver necessary medications in locations that lack enough roads. Unmanned aerial vehicle is remotely or automatically controlled. Software platform used is ArduPilot Mission Planner and mobile phone or tablet apps can be used to track and navigate. Network is managed by drone operating system to monitor weather data from every ground station and it optimizes the drone routes in this proposed approach we are designing a paper which is effective in many applications like transporting blood and small emergency medicines such as first-aid kits. Unmanned Aerial Vehicles can be used in future to provide medical help in field of surveillance and at the time of earthquake, drones help rescuers to locate survivors. The military in combat can use drones, and it can also be used for humanitarian aid.

## Earth Voltage Monitoring and Alert System for Indian ATM System

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**Dhanya.T**, Assistant professor, Department of Marine Engineering, AMET Deemed to be University, Chennai- 603112, INDIA

**G. Jegadeeswari**, Assistant professor, Department of Marine Engineering, AMET Deemed to be University, Chennai- 603112, INDIA

### *Abstract:--*

The environment changes like increase in moisture level, humidity, fall in temperature and everyday changes in the voltage levels leads to the generation of fault current. This high value of fault current has to be monitored continuously. The need for a monitoring and alert system is to protect the electronic device.

A proper grounding for equipment is must if not it leads to the induction of fault current. This fault current has a larger probability in providing a proper zero resistance path this leakage current. also provides safety to both humans as well as machines. This device is specifically designed for ATM system across the country, is capable of measuring the earth-neutral voltage up to 10 volts. When there occurs any isolation in the voltage levels due to the above mentioned changes, this microcontroller based alert system sends information to the authorised person through SMS and E-MAIL.As this device is not connected with the main system any surges in the ATM will not affect this device and has the ability to disconnect the device from fault in emergency cases.

### *Index terms*

GSM Module, Voltage regulator LM7805, LCD display, PIC microcontroller

## Multi Carrier Based New Random Pulse Width Modulation for Three Phase Inverters

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**B. Kirubadurai**, Veltech University, Chennai, India

### *Abstract:--*

PWM strategies are key options for extracting the quality controllable outputs from the VSI. The objectives involved in the different PWM strategies are improving the primary indices namely, enhancing the fundamental components, reducing the total harmonic distortion, minimizing the switching loss, specific removal of harmonic components etc... while the secondary issues like suppressing the electromagnetic interference, spreading the harmonic power etc. are also to be considered in contemporary applications. The concern of this paper is enhancing the harmonic power spreading of PWM strategies. The RPWM strategies, pave non-predictable harmonic pattern and called as non-deterministic PWM strategies. The inverter operating under RPWM produce the output harmonic spectra dispersed and continuously distributes across frequencies and, therefore. The acoustic noise also reduced. The paper has proposed a host of carrier based RPWM schemes to enhance the performance of the VSI and implemented them in FPGA involved digital platform. This paper also details with field programmable gate array (FPGA) based digital implementation of proposed RPWM techniques, the effective implementation is discussed in terms of resource utilization in FPGA. Speed and power dissipation are discussed in term of resource utilization in FPGA, speed and power dissipation. The RPWM technique is simulated by using time efficient co-simulation (Mat lab-Simulink) methodology.

### *Index terms*

PWM techniques; Harmonics; switching loss; Random PWM; FPGA; VSI; acoustic noise; MATLAB/Simulink.

## Power Quality Improvement in Microgrid Systems by Using IUPQC Controller

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**Sobhana.O**, Assistant Professor, Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering & Technology, Secunderabad, Telangana

### *Abstract:--*

In This paper power quality is improved in microgrid systems by using a FACT device named as IUPQC i.e. Interlinked Unified Power Quality Conditioner. IUPQC basically modified controller from normal UPQC Controller and small difference is that control techniques only. IUPQC Contained Series power filter (SPF) and Shunt power filter connected back to back end with common dc link capacitor. Help of Fuzzy logic technique in both UPQC and IUPQC Controller, we can reduce the voltage sag or voltage swell interruptions. Compared to UPQC, IUPQC gives fast and better result. Simulink models and results are done in MATLAB R2016A Software.

### *Index terms*

Flexible Alternating Current Transmission (FACT), (IUPQC), and Series Power Filter (SPF), Fuzzy Logic Controller (FLC).

## **IOT Driven Automated Object Detection Algorithm for Urban Surveillance System in Smart City**

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**D.Laxma Reddy**, Associate professor, Department of ECE, MLR Institute of Technology

**SVS Prasad**, Professor, Department of ECE, MLR Institute of Technology

***Abstract:--***

Automated object detection algorithm is an important research challenge in intelligent urban surveillance systems for Internet of Things (IoT) and smart cities applications. In particular, smart vehicle license plate recognition and vehicle detection are recognized as core research issues of these IoT-driven intelligent urban surveillance systems. They are key techniques in most of the traffic related IoT applications, such as road traffic real-time monitoring, security control of restricted areas, automatic parking access control, searching stolen vehicles, etc. In this paper, we propose a novel unified method of automated object detection for urban surveillance systems. We use this novel method to determine and pick out the highest energy frequency areas of the images from the digital camera imaging sensors, that is, either to pick the vehicle license plates or the vehicles out from the images. The other sensors like flame and ultrasonic sensor are used to monitor nearby objects. Our proposed method can not only help to detect object vehicles rapidly and accurately, but also can be used to reduce big data volume needed to be stored in urban surveillance systems.

## Survey on Localization Techniques in Wireless Sensor Networks

**M. Krishna Monika**, M.Tech in the field of Embedded Systems in Gokaraju Rangaraju Institute of Engineering and Technology

**N. Arun Vignesh**, an Associate Professor in the Department of Electronics and Communication Engineering, in Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad

**Asisa Kumar Panigrahy**, Associate Professor in the Dept. of ECE at GRIET, Hyderabad, India.

**Ch. Usha kumari**, professor in Department of ECE, Gokaraju Rangaraju Institute of Engineering and Technology (GRIET), Hyderabad.

### **Abstract:--**

Wireless Sensor Network (WSN) is most prominently used in many applications because of their low cost, less weight, and real-time response. Sometimes, the sensor nodes may not know their location. Thus, in order to estimate the position of the sensor nodes, localization techniques came into existence. Earlier, the location is calculated using GPS, but, it is not feasible to all the applications due to multiple reasons. This paper discusses various localization algorithms along with their advantages and disadvantages, based on the classification made. The localization techniques are classified into centralized and distributed, where distributed techniques are categorized as range-based approach and range-free approach.

### **Keywords:**

Localization, Sensor nodes, Wireless sensor networks, Range based technique, Range free technique.

## Traffic Congestion Monitoring and Management by Using IOT

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**K Nishanth Rao**, Assistant Professor, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad, India

**S V S Prasad**, Professor, HOD, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad, India

### **Abstract:--**

In this day and age, congested driving conditions during surge periods are one type of the real apprehensions. During flood days, emergency vehicles are trucks slow down out in jams. Along these positions, the emergency automobiles are not equipped to complete their objectives on time, it will leads into lost human lives. In this paper proposed to avoid such type of issues, in this paper presented on a self-ruling 2-level framework which will help in the recognizable proof of crisis vehicles or some other wanted vehicle. Here designed the IOT based structure, it will monitor and managing the traffic situation continuously.

### **Keywords:**

Arduinio controller, sensors, RFID, IOT Module.



## A Comprehensive Study on Passive Forgery Detection

**P.Divya Sree**, PG Scholar, M.Tech- Computer Science Engineering, GRIET, Hyderabad, India

**Dr.G.Mallikarjuna Rao**, Professor/CSE, GRIET, Hyderabad, India

**Abstract:--**

The dependability of computerized pictures is a critical worry since pictures can be made effectively because of the intemperate timetable of advanced picture falsification gadgets. In this way computerized picture validation is important just as it is the contemporary research ponder territory which plans to affirm the believability of advanced pictures. This investigation endeavours to give a recap of innumerable computerized picture impersonations just as detached systems to affirm advanced pictures. This examination attempts to cover the visually impaired techniques that have really been suggested for oppressing fake. This activity stress the location strategies for 3 of a standout amongst the most normal fabrication sorts, explicitly duplicate/move, grafting and furthermore modifying.

**Keywords:**

Digital image, Image authentication, Image forger

## PCI Matrix Based Image Reconstruction from Compressively Sensed Data

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**B. Sridhar**, Professor, Department of ECE, MLR Institute of Technology, Hyderabad, India

**S.V.S.Prasad**, Professor, Department of ECE, MLR Institute of Technology, Hyderabad, India

### **Abstract:--**

This paper propounds a joint system wherever in raise to a higher position-based, distinguishable, picture coordinated wavelets are measurable from squeezeingly seen pictures and are utilized for the remaking of indistinguishable. Coordinated swell is just outlined if full picture is advertised. Conjointly contrasted and the quality wavelets as scarifying bases, coordinated swell may surrender higher remaking closes in compressive detecting (CS) application. Since in metallic component application, we have squeezeingly seen pictures as opposed to full pictures, existing methods for arranging coordinated swells can't be utilized. In this way, we tend to propose a joint structure that evaluations coordinated wavelets from squeezeingly saw pictures and conjointly remakes full pictures.

3 Indispensable commitments. Initial, a lifting-based, picture coordinated severable swell is implied from compressively seen pictures and is furthermore wont to remake indistinguishable. Second, a simple detecting lattice is utilized to test data at sub-NY Quist rate such detecting and remaking time is decreased essentially. Third, a substitution staggered L-Pyramid swell decay procedure is accommodated severable swell execution on pictures those outcomes in enhanced remaking execution. Contrasted and the CS-based recreation misuse typical swells with Gaussian detecting network and with existing swell decay system, the arranged approach gives snappier and higher picture reproduction in metallic component application.

### **Keywords:**

Compressive sensing, matched wavelet, lifting, wavelet decomposition

## Design and Simulation of Sierpinski Carpet Fractal Antenna Array for Multi-Band Applications

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**V.Mounika**, Project Student, V.R.Siddhartha Engineering College, Vijayawada

**D.Malathi**, Project Student, V.R.Siddhartha Engineering College, Vijayawada

**J.Surya**, Project Student, V.R.Siddhartha Engineering College, Vijayawada

**Abstract:--**

High data rates and better data quality are demanded features for modern communication. Multiband technology is used to increase the gain, bandwidth to a certain level. This paper focuses on Sierpinski Carpet Fractal antenna (SCFA) Array using Mitered Bend feed network up to the 2nd iteration to increase the gain. 45° bend in a micro strip line reduces a large reflection from the end of the line. Each iteration is scaled down to 1/3rd of the previous iteration. This antenna is designed using HFSS on FR4 substrate with dielectric constant of 4.4, having thickness of 1.6mm and fed with 50 ohms micro strip line.

**Keywords:**

Multiband, sierpinski carpet, fractal antenna, array, mitered bend.

## Smart Sensors and ARM Based Drainage Monitoring System

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**Ramya Laxmi G**, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad -43, Telangana, India

**Renuka K**, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad -43, Telangana, India

**Karthik K**, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad -43, Telangana, India

### **Abstract:--**

The smart and underground drainage system is an important element of an municipal infrastructure. It is undoubtedly forms an integral part of our daily life. Nowadays, we can see that the people are facing many problems regarding drainage system. Now we are looking forward to implementation of the smart cities. Therefore, a system which handles underground water is essential to build. This project describes various functions used for maintenance and monitoring of underground drainage system all over the city. Various types of sensors like flow, level, and gas sensors are intervened by interfacing with microcontroller ARM7 in order to make the system smart. This project acts as a system which is developed to monitor the water level, water flow and gases. If drainage system gets blocked and water overflows this blockage will be instinctively recognized by the sensor. Specific sensors reached to the threshold level, the problem will be indicated and displays the message on the 16x2 LCD this information is sent through GSM to the nearby municipality service for the further corrective action.

This drainage monitoring system will help to maintaining the health of the people mainly during the wet season and ensure that people are safe. This monitoring also ensures that instinctive action is taken by the government personnel. The sensors do not give accurate values at times. There will be network problem in GSM when the sky is not clear.

## **Design of Watchdog Timer for Real Time Applications**

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**Ch.Umashankar**, Assistant Professor, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad, India

**S V S Prasad**, Professor, HOD, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad, India

### ***Abstract:--***

The Embedded system is employ in safety and critical application, which is greater reliability. The watchdog timers are used in automatic systems to handle the operation time for secure the timer failure. Majority of the watchdog timers used an additional circuit to adjust their timeout position and it will provide limited services in terms of working. This paper presents the architecture of a watchdog timer and also gives the design structure, it will working in safety and critical conditions. The operations are general and it can be used to monitor the working of any processor in real-time application. This paper discussed the implementation of the proposed timer in a FPGA. This will helps to design easily in different applications, it will gives reduces the overall system cost. The watchdog timers is to detect and give response very effectively and also gives the responses of faults by analyzing the simulations.

### ***Keywords:***

watchdog timer, computer, clock

# Modified Conjugate Gradient Algorithms for Gram Matrix Inversion of Massive MIMO Downlink Linear Precoding

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## **Abstract:--**

This paper deals with various low complexity algorithms for higher order matrix inversion involved in massive MIMO system precoder design. The performance of massive MIMO systems is optimized by the process of precoding which is divided into linear and nonlinear. Nonlinear precoding techniques are most complex precoding techniques irrespective of its performance. Hence, linear precoding is generally preferred in which the complexity is mainly contributed by matrix inversion algorithm. To solve this issue, Krylov subspace algorithm such as Conjugate Gradient (CG) was considered to be the best choice of replacement for exact matrix inversions. But CG enforces a condition that the matrix needs to be Symmetric Positive Definite (SPD). If the matrix to be inverted is asymmetric then CG fails to converge. Hence in this paper, a novel approach for the low complexity inversion of asymmetric matrices is proposed by applying two different versions of CG algorithms- Conjugate Gradient Squared (CGS) and Bi-conjugate Gradient (Bi-CG). The convergence behavior and BER performance of these two algorithms are compared with the existing CG algorithm. The results show that these two algorithms outperform CG in terms of convergence speed and relative residue.

## **Keywords:**

Massive MIMO, Linear precoding, Krylov subspace algorithms, convergence speed, relative residue.

## Remote Monitoring For Automated Irrigation and Crop Security System Using Millimeter Wave Frequency

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### **Abstract:--**

Approximately 80 percent of Indians are connected with the agriculture and its related activities. With increasing demand for the fresh water and high technology advancements, agriculture is controlled and adapted for better growth of crop production. In this paper, remote monitoring for smart agriculture applications using Bluetooth is presented and microwave remote sensing can be used to collect, analyze and monitoring data like temperature, humidity, soil moisture in dry and wet soil and PIR (Passive Infrared) sensors are used. Farmers are getting less production due to climatic variations and soil erosion. Percentage of fresh water is decreased in every year present 70 percent of fresh water is used for cultivation. Thus, there is an increased necessity for the farmlands to be controlled by using sensors, buggers and scarecrow (automated toys). The system proposed in this paper can easily be integrated with conventional systems for practical large scale agricultural applications also.

### **Keywords:**

Remote monitoring, smart agriculture applications, sensors, farmlands, integrated.

## Survey on Millimeter-wave Microstrip Patch Antenna design for 5G

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### *Abstract:--*

The objective of this article is to illustrate about the requirements of the patch antenna and to provide a short survey approximately the way to pick them. Seeing that 5G is the ultra modern era in the upcoming communication systems, we focused on the millimeter wave frequencies with an intention to give more information about them. This paper additionally explains about the impact of numerous parameters such as substrate thickness, resonant frequency, various feeding techniques. different shapes of patch, millimeter wave frequency ranges etc.. on the antenna performance.

### *Keywords:*

Requirements of Microstrip patch antenna, Impact of substrate, Impact of dimensions of the patch, impact of thickness of the substrate, impact of various feeding techniques, impact of shape of the patch, impact of resonant frequency.



## Harmful Gases Wireless Network Monitoring System Design

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**Arulananth T.S**, Professor, Department of Electronics and Communication Engineering, MLR Institute of Technology, Hyderabad -43, Telangana, India

***Abstract:--***

Single network for traditional wired and monitoring systems in the wiring, coverage, ability of process, affinity and other facet of the problem, this paper proposes to Zigbee technology-based, GSM technology, supplemented by the master-slave wireless network, this system architecture designed remote detection terminal, control master station, mobile monitoring terminal communication protocol. Remote monitoring terminal is used to detect the site environment and gas attentiveness. Remote sense terminals to detect scene conditions and gas concentration state. Control station is used to handle the main station to join the network of remote detection terminal data, timely alarm information dispatch to your phone via GSM module monitoring terminal. In addition, through the serial port to transfer data to a computer monitor server, to achieve the status of each remote terminal data analysis and management. Experimental results show that this paper designed system is capable of long-term stable and reliable operation with low power consumption, always online, covering a wide area advantages.

## Automatic Operation of Accomodation Ladder on Tidal Ports

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**Abstract:--**

This Paper is mainly focused on the Accommodation ladder of the ship, At present the Gangway is provided with the automatic operation in offshore fleets in order to Transport the Equipments from one ship to another, that is it can transport the equipment between two floating vessels and between one floating vessel and a static structure (for example in from ship to Offshore windmill structure). So this method can be modified and can be implemented in the Accommodation ladder and the damage that are being caused to the ladder can be Minimized to a maximum extent and will be very useful for the Tidal Ports.

**Keywords**

Machinery, Hull, Vibration, Trigger

## An Enhanced Study on Bidirectional Li-Fi Attocell Access Point Slicing and Virtualization Using Das2 conspire

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### **Abstract:--**

LiFi attocell get to systems will be conveyed wherever to help different applications and administration provisioning to different end-clients. The LiFi foundation suppliers should offer LiFi passages (APs) assets as an administration. This, be that as it may, requires an exploration test to be fathomed to progressively and adequately allot assets amonspecialist co-ops (SPs), while ensuring execution detachment among them and their separate clients. This paper presents an autonomic asset cutting (virtualization) conspire, which acknowledges autonomic administration and setup of virtual APs, in a LiFi Attocell get to arrange, in light of SP's and their clients benefit necessities. The proposed asset cutting plan gathers and breaks down the movement insights of the distinctive applications upheld on the cuts characterized in each LiFi AP and appropriates the accessible assets reasonably and relatively among them. It utilizes a control calculation to change the base conflict window of client gadgets to accomplish the objective throughput and guarantee broadcast appointment decency among SP's and their clients.

### **Keywords**

LiFi AP, LiFi attocell systems, asset cutting, MAC access virtualization, hypervisor, LiFi activity, VLC, SDN.

## **Reduction of Image Transmission Resources and Improvement in Image Security Using SPIHT, Fractional Fourier Transform and RSA Algorithm**

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***Abstract:--***

Medical images require large amount of resources for transmission and storage. Over the last few years, due to increase in popularity of medical imaging applications, it is very important to minimize both storage and the transmission bandwidth for communication of data. The resources can be minimized by using compression. Security of medical images is also very important. So it is essential to find a secure and effective approach to transmit the data over the networks. One of the best suitable solutions for secure transmission is encryption of medical image data. Discrete Fractional Fourier Transform (DFRFT) is used for reducing the dimensions of an image. Wavelet decomposition is used for the image Compression and RSA algorithm for encryption and decryption of image. In this paper novel approach is used which combines SET PARTIONING IN HIERARCHIAL TREES (SPIHT) and RSA for the image encryption and compression which enhances both the security and transmission rate. All the results are simulated in MATLAB software.

***Keywords***

Block Based Pass-Parallel SPHIT, Fractional Fourier Transform (FRFT), Mean Square Error, Peak Signal To Noise Ratio (PSNR).

## Spam Detection using NLP Techniques

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### *Abstract:--*

Natural Language Processing is a vital field of research having applications in different subjects. Text Classification is a part of NLP where the text is converted into a machine-readable form by performing various methods. Tokenizing, part-of-speech tagging, stemming, chunking are some of the text classification methods. Implementing these methods on our data gives us a classified data on which we will train the model to detect spam and ham messages using Scikit Learn Classifiers. We propose a model to address the problem of classifying messages as spam or ham by experimenting and analysing the relative strengths of several machine learning algorithms such as K-Nearest Neighbours (KNN), Decision Tree Classifier, Random Forest Classifier, Logistic Regression, SGD Classifier, Multinomial Naive Bayes(NB), Support Vector Machine(SVM) to have a comparative study of the performance of the method we devised in this work. The algorithm we proposed achieved an average accuracy of 98.49% with SVM model on 'SMS Spam Collection' dataset.

*Organized by:*

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*and*

**Institute For Engineering Research and Publication (IFERP)**

## **Me Too Movement Sentiment Analysis**

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### ***Abstract:--***

Sentiment Analysis (SA) is an ongoing field of research in text mining. SA is the computational treatment of opinions, sentiments and subjectivity of text. This study examines the sentiment of the tweets containing “#metoo”. As a comparison, the same analysis was performed on the MenToo movement. MeToo began gaining prominence in India with the increasing popularity of the international movement, and later gathered sharp momentum in October 2018 in the entertainment industry of Bollywood, centered in Mumbai, when actress Tanushree Dutta accused Nana Patekar of sexual harassment. An Indian filmmaker has joined calls for the creation of a “#MenToo” movement for men’s rights, saying it should be “as important as #MeToo. This case study gathers around 20,000 tweets from the major cities of India for the duration of a week. Tweets were analyzed through the ‘sentiments’ dataset of tidytext (afinn, bing, nrc) and RSentiments dataset. The goal was to better understand the overall sentiment and find the associated patterns. With the hashtag analysis, it can be seen that #metoo was associated with the film industry where as #mentoo was more rooted to the cause. The comparison of likes and retweets shows that #metoo movement has over 70% more engagement than #mentoo.

### ***Index Terms***

Sentiment Analysis, social media, #metoo, #mentoo, India, TidyText, RSentiments

## Low Power DFT Implementation for Asynchronous FIFO

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### *Abstract:--*

Asynchronous FIFO is a memory file which uses synchronization for reading and writing with different clocks, by performing the conditions of overrun and underrun. In essence, the transfer of data from read domain to write domain with different frequencies. To generate overrun and underrun status flags the synchronization takes place with the help of “preceding operation” of both the write and read pointers. In this design the gray code converters are used to reduce switching activity and the low power DFT technique was applied by considering the two phases that is scan insertion and ATPG Simulations. This design is executed by using synthesizable Verilog RTL Code and verified with xilinx ISE simulator.

### *Index Terms*

Asynchronous FIFO, synchronization, overrun, underrun, status flags, gray code converter, Design for test, RTL Code.

## Design and Implementation of Low Phase Noise, Wideband Clock Source for High Speed Data Converters

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### **Abstract:--**

Noise is the main parameter in the Phase locked loop (PLL). The main purpose of this paper is to design and implementation of integrated VCO frequency synthesizer that achieves less noise, wideband and extremely low spurious performance using the HMC830LP6GE Fractional-N Phase-Locked-Loop (PLL). HMC830 attributes an Integrated Voltage Controlled Oscillator (VCO) with a necessary frequency range from 1.5 GHz - 3 GHz, and the divider of Integrated VCO Output (divide by 1/2/4/6.../60/62), that a mutually permits the HMC830LP6GE to produce frequencies from 25MHz to 3 GHz. The Integrated Phase Detector (PD) and delta-sigma modulators are having the ability of working at up to 100 MHz; allow bandwidths of wider loop with good spectral achievement.

### **Index Terms**

PLL, VCO, Integrated phase detector, Serial Peripheral Interface (SPI), delta-sigma modulator, Phase noise, Spurious, HMC830.



## Production of Electrical Energy from Electronic Devices by Using Graphene

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### *Abstract:--*

In this automotive world the things are changing rapidly day by day and there is an evolution of new technology as the time in progress. As there is increase in technology the computing devices also increases and the speeding time increases. As the electrons flow through the electronic devices there is dissipation of heat. For every 10(degrees Celsius) raise in temperature the performance of the electronic devices is decreased by 20%. This makes the usage of graphene thin films. Here the heat from the electronic devices (example: Microprocessors and Microcontrollers) is absorbed by using graphene oxide which is layered on a silicon wafer like Silicon On Insulator film(SOI) and the absorbed heat is converted into electrical energy by using pyroelectric energy conversion from low grade thermal sources that exploits strong field –and temperature –induced polarization susceptibilities in the relaxor ferroelectrics  $0.68\text{pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{o}_3$ - $0.32\text{pbTio}_3$  and the resulting energy is stored at certain parts of the computer and can be accessible through programming. The emitted heat from the electronic devices is not only costly for the business but environment too. The electronic devices which are in electronic servers in data centres results in global warming. So this research may be helpful for increasing the lifespan of electronic devices, decrease in the power consumption of the electronic devices and to reduce the cost of the business. Finally to protect the environment too.

### *Index Terms*

Relaxor, Pyroelectric Energy, Polarization

## **Implementation of a Low Cost Beacon Receiver Based On the Software Defined Radio**

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**Dr.R.Ramana Reddy**, Professor, Department of ECE, JNTUA College of Engineering Pulivendula

### ***Abstract:--***

Implementation of a low cost digital beacon receiver based on the software defined radio for processing Ka band satellite signals is presented in this paper. The beacon receiver is used to detect and measure the signal strength of transmitted beacon signal. The beacon signals are well suitable for propagation measurement because of the stable transmitted power and frequency. Software defined radio is used to develop the beacon receiver functionality. The hardware required to implement beacon receiver are parabolic antenna, Low Noise Block converter (LNB), and Universal Software Radio Peripheral (USRP). The cost of the beacon receiver implemented using SDR is less compared to commercially available analog receivers. Beacon signals generated in this work are in Ka band frequencies. The beacon receiver operation is tested and validated by linearity, dynamic range, amplitude scintillation and DC offset voltage measurements. It is evident from the results that for a 1.2 m antenna, receiving a Ka-band beacon signal with 9 dBW EIRP, a signal level of about -130 dBm is received at its output. This would in turn yield a Carrier to Noise (C/N) ratio of about 46 dB-Hz at 76° North with an overall noise figure of 1.5 dB in clear air conditions. If the noise figure is less than equal to 1.5dB propagation measurements can be done effectively. The signals processing blocks used to realize SDR are written in C++ and Python.

### ***Index Terms***

Satellite Communication, Beacon Signal, Software Defined Radio, Universal Software Radio Peripheral, Low Noise Block Converter.

## **Hybrid Beamforming for 5G and Cognitive Radios**

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***Abstract:--***

The pathloss experienced by Millimeter wave is much more than the microwave signals currently used in most wireless systems. Large antenna arrays, therefore made possible by the decrease in wavelength of the mmWave, are used to overcome pathloss with beamforming gain. Beamforming with multiple data streams is known as precoding and increases the Spectral Efficiency. Traditional beamforming and precoding are done digitally at baseband for multi-antenna systems. The high cost and power consumption of digital precoding in mmWave systems, however, make analog processing in the RF domain more attractive. The RF chain structure provides a hardware limitation to Digital precoders. The Hybrid beamforming architecture provides a solution to utilize the sparse structure of the mmWave channel and to leverage the beamforming potential of the large antenna arrays. The well-known algorithm of Orthogonal Basis Pursuit is used to approximate optimal unconstrained precoders and combiners. Cognitive radios attempt to share spectra by introducing a spectrum sensing function, so that they are able to transmit in unused portions at a given time, place and frequency. In this paper we propose an underlay cognitive transceiver design that enable the mmWave spectrum access while negating the interference of the Primary User. As such the results of applying the Hybrid beamforming architecture is shown comparatively for the presence and absence of the Primary User.

## A Secured Data Protection Mechanism for Cloud Storage System

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### *Abstract:--*

Now a day's Cloud storage is recognized as a promising resolution for providing convenient, universal, and on demand access to larger amounts of knowledge shared on the web. The two-factor protection mechanism deals with revocability. The sender to send encrypted message to a receiver through a cloud storage server. It must recognize the identity of the receiver. The receiver must possess 2 things so as to rewrite the cipher text. The primary factor is his/her secret key hold on within the laptop. The two factors could be a characteristic personal security device that connects to the pc. It's not possible to rewrite the cipher text while not either piece. Additionally significantly, once the safety device is purloined or lost, this device is revoked. It cannot be wont to rewrite any cipher text. This may be done by the cloud server which can to in real time execute some algorithms to vary the prevailing cipher text to be un-decrypt able by this device. This method is totally clear to the sender. Moreover, the cloud server cannot rewrite any cipher text at any time. The safety and potency analysis show that our system isn't solely secure however conjointly sensible.

### *Index Terms*

Two-factor, Revocability, Security, Cloud storage

## A Witness Oriented Secure Location Provenance Modelling for Location Proofs

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### *Abstract:--*

In this paper we majorly focus on the Location based services mobile device users to access varied services supported the users' current physical location data. Path-critical applications, like offer chain verification, need a written account ordering of location proofs. It's a major challenge in distributed and user-centric architectures for users to prove their presence and therefore the path of travel in an exceedingly privacy-protected and secure manner. So far, planned schemes for secure location proofs square measure principally subject to meddling, not immune to collusion attacks, don't supply preservation of the birthplace, and aren't versatile enough for users to prove their birthplace of location proofs. During this paper, we tend to gift WORAL, an entire ready-to-deploy framework for generating and confirmative witness orientated declared location birthplace records. The WORAL framework is predicated on the declared Location Proof protocol [1] and therefore the OTIT model [2] for generating secure location birthplace on the mobile devices. WORAL permits user-centric, collusion resistant, tamper-evident, privacy protected, verifiable, and birthplace protective location proofs for mobile devices. The paper offerings the schematic growth, practicability of usage, comparative advantage over similar protocols, and implementation of WORAL for mechanical man device users as well as a Google Glass primarily based consumer for increased usability.

### *Index Terms*

Location Assertion, Location Proof, Location Provenance, Location Security, Witness Endorsement, WORAL.

## A Recommendation Model for User Trust and Item Ratings

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### *Abstract:--*

As an important method of knowledge filtering, the recommender systems are attracted and created plenty of interest within the past 10 years. The previous recommendation techniques and approaches are wide analysed within the data retrieval analysis communities, machine learning techniques and data processing. attributable to their nice business demand, the advice systems are with success figured out in industrial environments and in business areas, like recommendation of the merchandise at Amazon, recommendation of music at iTunes, recommendation of flicks at Netflix, and so on. Here, we tend to area unit proposing AN approach known as TrustSVD that may be a trust-based matrix resolution technique for product or service recommendations. This TrustSVD integrates many alternative data sources into the advice system to scale back the information sparseness and also the cold begin problems and their degradation performance. An important analysis of social trust knowledge from the few of real-world knowledge sets tells that, the specific and implicit influence of each ratings and trust should be taken into thought for a recommendation model. thus TrustSVD builds upon the progressive recommender technique called, SVD++ (which makes use of influence of implicit and express rated items), by in addition incorporating each influence of sure and trusting users upon the prediction of the things for a lively user. Supported our wise data of recommender systems, the planned technique is that the initial one to boost SVD++ with the social trust data.

### *Index Terms*

Recommender systems, social trust, matrix factorization, Explicit and implicit trust, collaborative filtering

