Prediction and Prognosis of Diabetes Using Logistic Regression

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Abstract: -Diabetes mellitus commonly called diabetes is a commonly occurring major issue in the field of medicine and due to this disease lakhs of individuals are suffering due to this polygenic disorder. For the past few decades, research has been conducted regarding diabetes and overcoming it, and detecting it in the early stages. In the vast major problems occurring to different individuals of the society due to diabetes this project is mainly concerned with the pregnant women i.e., they may be diagnosed with diabetes which is called gestational diabetes and this increases the chance of getting type-2 diabetes which islethal. generally, diabetes occurs when the body doesn't use the insulin produced in the body to neutralize glucose levels. For this reason, in the medical field, there are many ways to predict whethera certain individual has the probability of getting diabetes. We will be using the dataset provided by thePima. There is a high risk of other diseases if diabetes is not treated in its early stages for various organs.in general, we usually visit any medical institution to testfor diabetes using the blood test and other fluid tests. But to reduce this hassle many kinds of research have proposed some solutions which use the machine learning based on the past data of the patients who tested positive and negative for diabetes. In this article proposed a method by using famous machine learning models and choose the best method to predict diabetes.

Keywords: —Machine learning, Gestational diabetes, Logistic regression model, Classification.

I INTRODUCTION

Diabetes, sometimes referred to as diabetes mellitus, is a metabolic condition that causes hyperglycemia. Sugar is transported from the blood to the cells by the hormone insulin, where it is stored or utilized as fuel. When you have diabetes, your body either generates insufficient insulin or fails to utilize the insulin it does make efficiently. There are many different varieties of diabetes, with type-1 diabetes being one of the most prevalent forms in people. Type-1 diabetes often develops when the host's body does not produce any insulin to neutralize the body's glucose levels.

Type-2 diabetes is another prevalent form of the disease, which is often encountered in middle-aged and elderly adults [1-5].

But the type of diabetes this literature focuses on is gestational diabetes which is commonly seen in diabetes. The major problem related to gestational diabetes it can further lead to type-2 diabetes which is not good in any aspect. And also, diabetes that occurs during the pregnancycan be type-2 diabetes in some cases so we should be careful about it. Diabetes can cause serious health problems such as nerve damage, vision difficulties, renal disease, heart disease, and so on. The primary causes of type 2 diabetes are becoming older, having diabetes in thefamily, being overweight, having high blood pressure, andnot engaging in any physical exercise. physically. The most common symptoms of type 2 diabetes include hazy sight, fatigue, increased appetite, increased urination, andso on There is a greater risk of obtaining gestational diabetes as a result of hormonal changes. Diabetes, as wellas being overweight and pregnant, cause women to gain weight. Therefore, there is a greater risk of developing diabetes in the future [6-10].

Simply put machine learning can be put as a subset or offset of the vast artificial intelligence. Machine learning deals with computational science which is totally dependent on the data of the past or present to predict future or foolproof plans. Machine learning focuses on analyzing and interpreting the hidden patterns and structures in the data to enable learning, reasoning, and decision making in the future needed based on what we have learned using the past data.

Fig.1. Machine learning Flow

S SUPERVISED LEARNING

As implied by the name, supervised machine learning requires

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Intelligent Computing and Applications pp 439–445

The Adaptive Strategies Improving Digital Twin Using the Internet of Things

N. Venkateswarulu, P. Sunil Kumar Reddy, O. Obulesu ✉ &
K. Suresh

Conference paper │ First Online: 14 November 2022

164 Accesses

Abstract

Digital twins for factories and processes are
becoming more prevalent and more valuable as a
result of recent technological breakthroughs and
the rise of smart manufacturing. There are also
more potential for closed-loop analytics with digital
twins, as well as with the rise of connection, data
storage, and the Industrial Internet of Things (IIoT).
Some factories have employed discrete event

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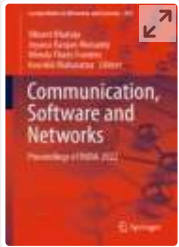
Communication, Software and Networks pp 321–329

OMSST Approach for Unit Selection from Speech Corpus for Telugu TTS

K. V. N. Sunitha & P. Sunitha Devi ✉

Abstract

Design of a text-to-speech system requires fine-tuning to achieve human-like utterance. For Dravidian languages like Telugu that are morphologically rich, this problem can be addressed by minimizing the number of concatenations. In order to reduce the number of concatenations, this research proposes an approach named OMSST to select speech units which minimize the concatenation cost and thus results in more naturally sounding speech. In this approach, most frequent speech units of different length

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Data Science and Security pp 373–382

A Hybrid Feature Selection for Improving Prediction Performance with a Brain Stroke Case Study

D. Ushasree ✉, A. V. Praveen Krishna, Ch. Mallikarjuna Rao & D. V. Lalita Parameswari

Conference paper │

Abstract

In the contemporary era, artificial intelligence (AI) is making strides into every conceivable field. With advancements in place, there have been applications of machine learning (ML) in healthcare domain. Particularly for diagnosis of diseases with data-driven approach, ML algorithms are capable of learning from training data and make predictions. Many supervised ML algorithms came into existence with varied capabilities. However, they do

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Smart Intelligent Computing and Applications, Volume 2 pp 191–198

An Ensemble CNN Model for Identification of Diabetic Retinopathy Eye Disease

M. Seetha ✉, N. Kalyani & Y. Sravani Devi

Abstract

Diabetic retinopathy is an eye disease which occurs due to the impairment of the blood vessels at the retinal sensitive tissues. The disease can become severe if proper identification and management are not handled through comprehensive eye examination of ophthalmologists. Several techniques combined have been proposed using classification methods, machine learning algorithms, and require more time for training and

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Smart Intelligent Computing and Applications, Volume 2 pp 191–198

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M. Seetha ✉, N. Kalyani & Y. Sravani Devi

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Smart Intelligent Computing and Applications, Volume 2 pp 191–198

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International Conference on Artificial Intelligence and Sustainable Engineering, pp 407–418

Conference paper

GA-ANN Framework for Breast Cancer Classification Using NSGA-II

Mallikarjuna Rao Gundavarapu, M. Divya Satya Padma, Ch. Mallikarjuna Rao, D. V. Lalitha Parameswari & G. Saaketh Koundinya

Conference paper │ First Online: 30 April 2022

214 Accesses │ **1** Citations

Abstract

The Indian Medical Research Council records 1.5 lakh new cases of breast cancer in India, of which 70,000 occur each year. One of the main aspects of this problem is proper diagnosis at proper time In spite of various approaches suggested by researchers in this direction, their dependability on dataset, outliers, technology and transitory

Industrial Wireless Sensor Network Integration with Cloud Environment using IPv6 Routing

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***Abstract -** This research article discusses about the focal points and difficulties of cloud-based framework engineering in observing and examining the factual organization execution. The focus of thsi research effort is on integrating modern remote sensor groups, which are made up of low-power remote devices for detecting and activating a real-time connection with cloud infrastructures, enabling remote access over secured and uninterrupted connections. The proposed cloud connecting structure executes RESTful administrations at the WSN's facilitator hub level, allowing for the use of a more adaptable and efficient communication structure. The general framework provides advantages for perception, information stockpiling and preparing it for dispersed calculations, which can divide into heterogeneous staggered observing and control frameworks. This research work presents a displaying and reenactment approach for enabling adaptable IPv6-based modern remote sensor organizations, feature powerful instruments for cloud interoperability and contention along with the achievability of the proposed framework.*

Keywords: cloud infrastructures, industrial wireless sensor networks, IPv6 routing

1. INTRODUCTION

Actualizing observing and control applications dependent on Industrial Wireless Sensor Networks (IWSN) has been demonstrated to acquire extraordinary advantages explicit application spaces where there is a requirement for data gathering over a progressively disseminated region [1]. Dynamic arrangement of sensor hubs, their programmed disclosure, self-association and conveyed information gathering components make IWSN models profoundly adaptable and versatile as indicated by application needs at a particular snapshot of time. The fundamental downsides of IWSNs are the restricted limit of the organization

hubs and the low-level cross examination for getting to arrange information. Cloud computing brings extraordinary points of interest with regards to broadening the abilities of a framework by utilizing virtualized assets that permit admittance to expanded capacity, expanded preparing force and programming execution stages. With the rise of Industry of Things advances, coordinating WSN into the cloud comes as a characteristic course for additional turn of events. The fundamental moves that should be tended to in a WSN-cloud design comprise of the deliberation at the application level that permits the specialist to zero. In additional to that the best way to actualize the ideal usefulness and less on the WSN arrangement and low-level programming. Administration Oriented Architecture frameworks give an Internet-based methodology where application level – physical level collaboration is converted into a more adaptable correspondence.

Concerning cloud reconciliation of remote detecting and incitation frameworks conveyed for measure observing and manage applications, this ideology executed for modern remote sensor organizations. The first good settled option in the area of IWSN [2], the installed detecting and incitation network is detached in the plant office at the cycle level. A focal organizer deals with the hubs and handles each communication with the rest of the world. All outer solicitations are dealt with by the organizer and the approaching information stream from the hubs is parsed in this stage. A noticeable illustration of IWSN engineering execution is upheld by the Wireless HART control proposal [3]. The principle objective is to coordinate inheritance wired HART convention gadgets and new remote minimum power wise physical gadgets in a typical organization. Wireless HART actualizes low-power

Analysis on the Prediction of Sales using Various Machine Learning Testing Algorithms

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Abstract - The amount of data created is so large that we are unable to process it all on our own. For this goal, a variety of machine learning approaches have been developed. The objective is to perform prediction of sales for super markets using different regression and boosting approaches, and figuring out which algorithm is suitable for the job. Traditional sales and marketing goals do not assist organizations keep up with the pace of a competitive market because they are carried out without any knowledge about customers' purchasing behaviors. The advancements in machine learning have had a tremendous impact on the world of sales and marketing. Item weight, item fat content, item visibility, item kind, item MRP, outlet establishment year, outlet size, and outlet location type are all included in the prediction.
Key Words: Sales, linear regression, Random forest, XG Booster, Bayesian Regression

1. Introduction

Sales prediction is useful in a variety of industries since it aids in the improvement of a company's sales by allowing for future planning. Sales forecasting is the practice of analyzing a company's sales statistics from previous years to forecast the company's future short- and long-term sales performance.

This is one of the pillars of proper financial planning, Sales predication is a critical prerequisitesfor venture arranging and adjust choice making, permitting companiesto superior arrange their trade exercises. Accurate prediction of sales helps company to form their future plans and strategies. Sales forecasting is critical in guiding the warehousing department's sales and marketing as they arrange warehouse locations [1]. Sales data, on the other hand, can better reflect future sales trends. Predicting sales is a common use of machine learning. Prediction of sales can be used to determine the impact of new product and the future plans of the product. Recent surveys showed machine learning had a great impact on sales prediction [2].

In the present world, due to rapid increase in usage of machine learning technology, many real world problems are solved using machine learning. Predicting the sales of the company is also a real world problem which helps company to boost their profits. So, the solution to this problem which is predicting sales of a company is done using machine learning algorithms [5]. There are many algorithms in machine learning which helps in predicting sales like linear regression, xg booster regression, and Random forest regression. We tried to get better accuracy and better sales prediction using these algorithms.Targeting the customers is the main focus of business sectors. Profitability is critical for any business.

Sales forecasting requires analysing data from a range of sources, such as market trends, economic indicators, and consumer behaviour.customer feedback and their responses and various other factors. Sales analysis helps company to decide whether to invest in a product or not [6]. This sales forecasting can be used for many purposes, such as predicting the future demand of the products or

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Applications of Artificial Intelligence and Machine Learning pp 81–90

A Machine Learning Based Approach for Detection of Distributed Denial of Service Attacks

Raghavender Kotla Venkata ✉

Conference paper │ First Online: 14 September 2022

576 Accesses

Abstract

Distributed Denial of Service (DDoS) attacks are large scale Denial of Service (DoS) attacks over Wide Area Networks (WSNs). In the contemporary era of digitalization and seamless integration of businesses using Service Oriented Architecture (SOA), DDoS attacks are increasing significantly leading to higher risk of critical digital infrastructure. Such cyber-attacks are alarming as they threaten national cyber safety and security.

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Inventive Computation and Information Technologies pp 879–888

Analysis of Deep Learning Models for Early Action Prediction Using LSTM

D. Manju ✉, M. Seetha & P. Sammulal

Conference paper │ First Online: 18 January 2022

Abstract

Video surveillance is being increasingly adopted for ensuring safety and security both in public and private places. Automated prediction of abnormal events like theft, robbery, murder etc., from continuous observation of surveillance videos is a multidisciplinary study involving computer vision, deep learning and artificial intelligence. Deep learning-based video analysis and categorization is a most researched topic. Many deep learning models based on long short-term memory (LSTM)

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International Conference on Intelligent Computing and Communication

ICICC 2022: **Intelligent Computing and Communication** pp 161–170

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Stress Detection in Classroom Environment Using Physiological Data

A. Sharada ✉, Bhageshwari Ratkal, M. Lalitha, K. N. V. Samhitha & A. Rishika Reddy

Conference paper | First Online: 20 September 2023

Abstract

In current scenario, mental stress has detrimental impacts on one's health. To mitigate detrimental ramifications, high-level stress must be detected early on. Following the introduction of wearable devices that could become a part of our daily lives, according to study, researchers have started detecting extreme stress in people who used them during their daily routines. An automatic stress detection system is developed by incorporating physiological signals obtained from unobtrusive clever, smart portable wearable devices that can be carried during individuals' daily life routines. Using various approaches of machine learning, successfully differentiated contest stress, relatively higher cognitive load (lecture), and relaxed time activities using heart activity, skin conductance and accelerometer signals, and skin temperature. Main objective is to develop a wrist band which identifies whether the student is under stress or not based on various parameters like heartrate and temperature of human body. This information can be obtained by employing various sensors such as an electrocardiogram (ECG), galvanic skin response (GSR).

Keywords

Electrocardiogram (ECG)   **Galvanic skin response (GSR)**

Radio-frequency identification (RFID)   **Health care**   **Stress**   **Anxiety**

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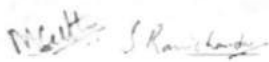
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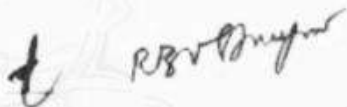## Intelligent Computing and Communication (ICICC-22)

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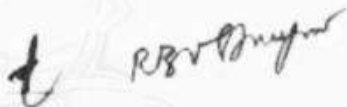Autonomous (Accredited by NAAC & NBA)

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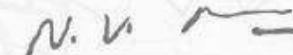
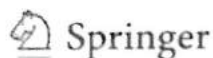| Conference Chairs | General Chairs | Dr. K. Ramesh Reddy
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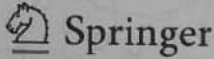
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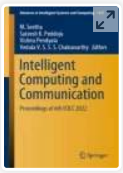## Intelligent Computing and Communication (ICICC-22)

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A Hybrid PSO-Fuzzy Trust Energy Aware DRP in Wireless Sensor Network

Y. Chittibabu ✉, B. Spandana, Roja Gurrapu & G. Venkata Hari Prasad

Conference paper │ First Online: 20 September 2023

Abstract

Minimization of consumption of energy, improving transmission of data in a secure manner, and enhancing the life span of the network are the main objective of wireless sensor network (WSN). Trust is the feature that is utilized in day to day life and helps in decision-making during complex issues. A trusted network can compute via applications of fuzzy logic in neighboring nodes. An important heuristic algorithm is computer program for Shuffled Frog Leaping (SFLA) that belongs to the category of swarm intelligence optimization and triggers novel heuristic research in finding an optimal solution for a mathematical function. The movement of swarms and social behavior of fishes and birds are mimicked in the population-based Particle Swarm Analysis (PSA).This work presents a hybrid PSO-Fuzzy Trust Energy Aware Directed Random Propagation (DRP) routing.

Keywords

Wireless sensor network (WSN)   **Trust**   **Fuzzy logic**

Computer program for Shuffled Frog Leaping (SFLA)

Particle Swarm Analysis (PSA)

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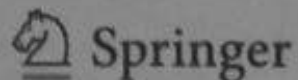## Intelligent Computing and Communication (ICICC-22)

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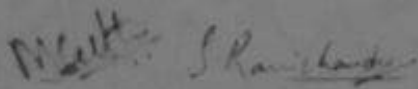# G. Narayanamma Institute of Technology & Science (for Women)

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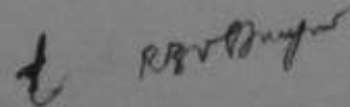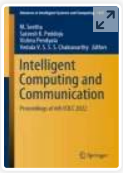Autonomous (Accredited by NAAC & NBA)

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ICICC 2022: **Intelligent Computing and Communication** pp 369–385

River Network Identification from Satellite Imagery Using Machine Learning Algorithms

M. Seetha ✉, D. V. Lalitha Parameswari ✉ & G. Malini Devi

Conference paper │ First Online: 20 September 2023

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 1447)

Abstract

Over 500 million people live near rivers, which are significant coastal depositional systems. River network identification is needed for hydro logical simulations to improve the understanding of hydro logical processes. They have a great significance to flood assessment and ship navigation. Rivers have a tight connection to ecological, socioeconomic environment, and agriculture. Mapping of rivers and canals networks is very important in applications related to water resources management. It helps us prevent significant loss of life and property by detecting natural disasters like floods. In this project the proposed model enhances and detects the complete river networks. Enhancement and feature extraction can be done using filters such as Gabor, PCA, and GLMC. Gabor filter helps in enhancing the river cross-sections and longitudinal continuity. A dataset's dimension (columns) is reduced through Principal Component Analysis (PCA). To acquire statistical texture features, Grey level co-occurrence matrix (GLCM) is developed. The number of pixels that change between two pixel values is counted by GLCM. In other words, the histogram's bin with indices equal to the values of the two pixels is increased. The strategies for classifying from a high-resolution multispectral satellite image, the river network is mapped using support vector machines and Random Forest. Support vector machine (SVM) and Random Forest are supervised machine learning models that uses classification algorithms for two-group classification problems. These algorithms can provide robust, accurate, and effective results for the provided image samples. A comparative study can be done on these classification techniques to evaluate the performance measures like accuracy and kappa coefficients.

Keywords

Machine learning   Image processing   Preprocessing   Annotation
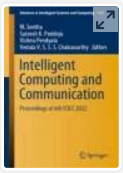
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Natural Scene Text Detection in Video with Hybrid Text Augmentation and Fusion-Transferred Learning

Mortha Manasa Devi ✉, Maddala Seetha & S. Vishwanadha Raju

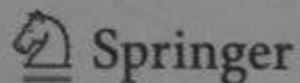Conference paper | First Online: 20 September 2023

Abstract

We propose a robust approach of region proposal network through graph-based approach and hybrid text augmentation for detecting and recognizing the video text with different languages, fonts, complex background, and natural scene patterns. First, we use diverse regions using region proposal network (RPN) to identify the text that positioned in different location in the video with different sizes and scales. The locations are identified by segmenting the regions with similarity measure through graph-based approach that adds ability to find the correctness of the text locations. Then, along with the text augmentation, the ability of RPN is improved in locating and classifying the text by finding the bounding box coordinates. Second, a classification network though transfer learning from VGG19 is adopted to eradicate the false positives. Finally, we developed the fusion technique to obtain a clean scene text layer and verified the correctness of text by optical character recognition techniques.

Keywords

Scene text   **Video text**   **Text**   **Detection**   **Transfer learning**

Fusion   **RPN**   **VGG19**

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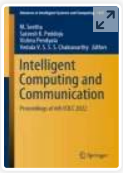
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Attention-Based Approach for English to Hindi Translation

H. S. Gururaja ✉, M. Seetha, Niranjan Hegde & Ankit Das

Conference paper | First Online: 20 September 2023

Abstract

Artificial Intelligence (AI) is cleverly evolving with time and in large volumes of computational and processing strength and excessive call for the final quarter, greater than a billion dollars. Through language translation, people from different parts of the world can communicate, work together, and develop relationships. Machine Translation is undergoing a major transformation thanks to the use of neural networks in machine learning (MT). Looking at the identical aspect, a Machine Translation for English to Hindi has been proposed using the likes of Neural Machine Translation techniques along with attention mechanisms. Neural Machine Translation (NMT) is a modern approach which gives extremely good enhancements in evaluation of traditional system translation techniques. Neural Machine Translation has been capable of reaping massive development over ancient techniques: Rule primarily based model and Statistical Machine Translation. Aiming on the trouble of managing a lengthy distance dependency, attention mechanism is incorporated into the interpretation model, as a result the preprocessing module, encoder-decoder framework, and attention module of the system also are adopted.

Keywords

NMT   Attention mechanism   RNN   LSTM   GRU   Transformer

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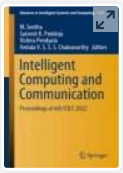
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Deep Learning Model with Progressive GAN for Diabetic Retinopathy

Vinay Mathukumalli, Vaishnavi Yada, Shreya Bashetty, Seetha Maddala & Kalyani Nara ✉

Conference paper │ First Online: 20 September 2023

Abstract

When eye illnesses are found early on, they can often be treated more successfully in the medical sector. One of the main causes of blindness globally is diabetic retinopathy, an eye condition that is a consequence of diabetes. Regular check-ups via diabetic retinopathy (DR) screening programs are essential for detecting the disease as early as possible and for determining the adequate treatment. If this is not detected early, it leads to blindness and hence to be prevented from causing further damage or reducing the risk of vision loss. A significant obstacle to deep learning algorithms' efficacy has been a lack of relevant class-specific data, particularly in the field of medical imaging. So, the main challenge for developing deep learning models is the limited amount of data. Although datasets are available from different resources, they are not sufficient for developing deep learning models. To address this issue, the dataset is artificially expanded by creating various iterations of a real dataset using generative adversarial technique (GAN), a data augmentation technique. The outcomes demonstrate that the GAN technique (i.e., data augmentation) aids in the generation of new samples from the existing dataset and improves the deep learning models' accuracy to provide the best-fit model for the dataset.

Keywords

Diabetic retinopathy   **Generative adversarial networks**   **Deep learning**

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ICICC 2022: **Intelligent Computing and Communication** pp 355–367

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G-EYE: Smartphone Compatible Portable Indirect Ophthalmoscope for Generating Quality Fundus Images

N. Kalyani ✉, M. Seetha, Y. Sravanidevi & M. S. V. L. Sasirekha

Conference paper | First Online: 20 September 2023

Abstract

Retinal imaging remains as challenge using a Smartphone. Fundus imaging through portable device enables fundus examination affordable, which can bring a revolutionary change in eye diagnosing system. This key feature attracts attention of many researchers to explore and design portable devices to capture the best quality of image. This makes it simple to gather a dataset of fundus images that can then be used to train various models linked to eye ailments. The dataset is generated with possible maximum resolution depending on smartphone camera and to train and test deep learning models for the prediction of eye diseases. The portable device can be used to record eye fundus in rural areas where there aren't any slit lamp devices or expensive indirect ophthalmoscopes. The inability to successfully complete computer-aided diagnosis has been hampered by the lack of extensive publicly available information. The contributions of this paper is the design details of the portable device G-EYE that is compatible to smart phone and methods adopted to collect quality retinal images for research.
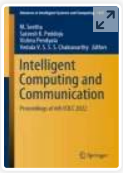
Keywords

Portable fundus camera   20D lens   Ophthalmoscope   Raspberry pi 3

Retinal imaging

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Interview Supporting System Using Facial Features

Kondur Datha Vaishnavi, Kokkonda Ranee Prathyusha, A. Sharada ✉ & Sahithi Kalluri

Conference paper │ First Online: 20 September 2023

Abstract

In this era of technology, recruiting candidates to fit a particular job profile is a crucial task for all the companies. The traditional way of recruiting has changed over time. Determining the confidence of a person in an interview acts as a major factor in the recruiting process. A typical human recruiter can handle up to 20–50 candidates at a given time, but a machine can perform the same task more effectively in a short amount of time. The Interview Supporting System in the field of education acts as a helping hand for students and improves their performance based on the utterances and facial features. The main goal is to develop a system which determines the confidence level of the interviewee based on the number of filler words in their answers and their emotions using HOG features. The confidence levels are classified into very confident, neutral, and poor. This Supporting System helps students to estimate and enhance their skills before attending the interview.

Keywords

Emotion recognition   **Confidence**   **HOG**

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Segmentation of Lung Regions for the Detection of Juxta-Pleura Nodules in CT Scan

B. Sasidhar ✉

Conference paper | First Online: 20 September 2023

Abstract

Extraction of lung fields helps in reducing the time taken for the recognition of juxta-pleura lung nodules. The existing approaches cannot extract pleura with juxta-pleura nodules. In proposed approach, active contour, region growing, morphological operators, convex hull, and XOR operation are used to extract pleura with juxta-pleura nodules. The proposed approach is tested on 100 images and an average overlap measure (AΩ) of 99.0% is calculated.

Keywords

Pleura's   **Morphological operators**   **Thresholding**   **Active contour**

Region growing   **Convex hull**

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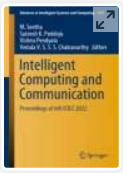
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A Hybrid PSO-Fuzzy Trust Energy Aware DRP in Wireless Sensor Network

Y. Chittibabu ✉, B. Spandana, Roja Gurrapu & G. Venkata Hari Prasad

Conference paper │ First Online: 20 September 2023

Part of the Advances in Intelligent Systems and Computing book series (AISC,volume 1447)

Abstract

Minimization of consumption of energy, improving transmission of data in a secure manner, and enhancing the life span of the network are the main objective of wireless sensor network (WSN). Trust is the feature that is utilized in day to day life and helps in decision-making during complex issues. A trusted network can compute via applications of fuzzy logic in neighboring nodes. An important heuristic algorithm is computer program for Shuffled Frog Leaping (SFLA) that belongs to the category of swarm intelligence optimization and triggers novel heuristic research in finding an optimal solution for a mathematical function. The movement of swarms and social behavior of fishes and birds are mimicked in the population-based Particle Swarm Analysis (PSA).This work presents a hybrid PSO-Fuzzy Trust Energy Aware Directed Random Propagation (DRP) routing.
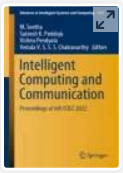
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Prediction of Next Words Using Sequence Generators and Deep Learning Techniques

P. Sunitha Devi ✉, Chepuri Sai Tejaswini, Modem Keerthana, Manusree Cheruvu & Minati Srinivas

Conference paper │ First Online: 20 September 2023

Abstract

Would not it be wonderful if your computer could anticipate what you may type as your next word? For a certain user's texting or typing, the next word prediction can be very helpful. People would be more productive as a result of the significant time savings. Predictive text is an input technology that facilitates typing on a mobile device by suggesting words that the end user may wish to insert in a text field. Predictions are based on the context of other words in the message and the first letters typed. We intend to bring this prediction to the next level. Recurrent neural networks are used in prediction of next word which is a neural application. Standard RNNs can be trained to tackle some issues, but it can be challenging to teach them to learn long-term temporal dependencies. LSTM networks are applied to solve this problem. By advancing the technology now in use, we hope to anticipate the next words that could fit the statement and create a user-friendly application for it.
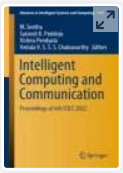
Keywords

Word prediction   **LSTM**   **Bigram**   **Trigram**   **Sequence generator**

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River Network Identification from Satellite Imagery Using Machine Learning Algorithms

M. Seetha ✉, D. V. Lalitha Parameswari ✉ & G. Malini Devi
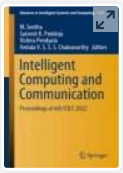
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Abstract

Over 500 million people live near rivers, which are significant coastal depositional systems. River network identification is needed for hydro logical simulations to improve the understanding of hydro logical processes. They have a great significance to flood assessment and ship navigation. Rivers have a tight connection to ecological, socioeconomic environment, and agriculture. Mapping of rivers and canals networks is very important in applications related to water resources management. It helps us prevent significant loss of life and property by detecting natural disasters like floods. In this project the proposed model enhances and detects the complete river networks. Enhancement and feature extraction can be done using filters such as Gabor, PCA, and GLMC. Gabor filter helps in enhancing the river cross-sections and longitudinal continuity. A dataset's dimension (columns) is reduced through Principal Component Analysis (PCA). To acquire statistical texture features, Grey level co-occurrence matrix (GLCM) is developed. The number of pixels that change between two pixel values is counted by GLCM. In other words, the histogram's bin with indices equal to the values of the two pixels is increased. The strategies for classifying from a high-resolution multispectral satellite image, the river network is mapped using support vector machines and Random Forest. Support vector machine (SVM) and Random Forest are supervised machine learning models that uses classification algorithms for two-group classification problems. These algorithms can provide robust, accurate, and effective results for the provided image samples. A comparative study can be done on these classification techniques to evaluate the performance measures like accuracy and kappa coefficients.

Keywords

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G-EYE: Smartphone Compatible Portable Indirect Ophthalmoscope for Generating Quality Fundus Images

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Keywords

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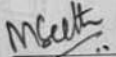# G. Narayanamma Institute of Technology & Science (for Women)

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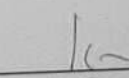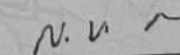## Intelligent Computing and Communication (ICICC-22)

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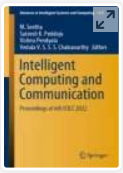
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A Deep Learning Paradigm for Classifying Personality

[K. V. Raghavender](#) ✉, [S. Ravi Kumar Raju](#), [S. Alankruthi](#), [M. Ashritha](#), [G. Poojitha](#) & [B. Avyaktha](#)

Conference paper | [First Online: 20 September 2023](#)

Abstract

Personality refers to a person's distinctive ways of thinking, feeling, and behaving in a variety of contexts. These traits are what consistently characterize a person's behavior. It influences how we come to decisions, work through issues, resolves disputes, and handle stress. The Myers-Briggs type indicator is currently the most popular psychological type assessment in use worldwide. This dataset was obtained via Kaggle. It enables us to positively deal with people's diversity by allowing us to anticipate certain personality traits in specific individuals. Many IT businesses are employing candidates with strong interpersonal communication abilities in today's society. To measure these, we developed a method to determine their personality, which can help in decision-making. Using different machine learning approaches like SVM, DT, and LR, several past research has attempted to categorize people into different personality types. LSTM, a deep learning model, is now being used to help classify people's personalities. In contrast to more conventional feedforward neural networks, LSTMs feature feedback connections. This property allows LSTMs to process entire data sequences without taking into account each point in the series individually, instead maintaining useful information about earlier data in the sequence to help in the processing of incoming data points to effectively classify the user texts. Finally, this supports the management, selection, and advancement of policies within organizations.

Keywords

Long short-term memory (LSTM)   **Myers-Briggs type indicator (MBTI)**

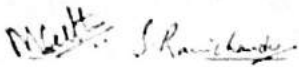# G. Narayanamma Institute of Technology & Science (for Women)

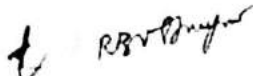Autonomous (Accredited by NAAC & NBA)

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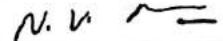
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A Broadband MIMO Array with Gap Coupling For 5G Applications

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Abstract: A Multiple Input Multiple Output (MIMO) array was designed using a Broadband three-patch gap antenna which has both electric and magnetic elements to couple. A step design is implemented between the elements for Electromagnetic coupling. A MIMO Antenna of four element with a gap is designed at 3.75 GHz. It has the advantages of wideband and multiband capabilities, lower in weight, less volume with thinner dimensions. Communication through 5G Applications is the state of art Technology in which the proposed antenna is most suitable. The compact multiple input multiple output four element array is designed at a frequency of 3.75 GHz. The designed MIMO array has good impedance matching and high isolation between channels. A Comparison with different substrates is done for Optimization. The three layered design in which air is considered as one of the substrates gives very good performance characteristics.

Keywords: MIMO (multiple input multiple output) array, 5G Application, High isolation, Three layered design, Gap coupled three patch antenna

Introduction:

Modern communication systems prefer antennas with wider bandwidth and minor in dimensions, which initiated research towards gap coupled with three patch antennas. The motivation for the use of coupling in antenna engineering is to extend antenna design.

Modern communication systems prefer antennas with wider bandwidth and precise in dimensions, which initiated research towards gap coupled with three patch antennas. The motivation for the use of coupling in antenna engineering is to extend antenna design for improvement in characteristics. Various techniques have been implemented for the enhancement of the much more demanded Bandwidth [1-5]. Later MIMO arrays were designed with no mutual coupling [6-9] between elements and at the same time with high Isolation characteristics. Fractal Antenna structures were used for wideband 5G Applications [10]. Arrays using twisted arm slot coupled Waveguides were developed [11] but with a trade off in compactness. The patch antenna geometry gives a good solution to achieve a highly compact, low profile with multiple bands and wideband characteristics. Antenna with

gaps between patches is designed first. A structure of four such antennas is designed on a single substrate confining to a MIMO Array and simulated at 3.75 GHz. A very good performance resulting in Gain of the order of 7.5 dB and a Return loss of -37 dB were obtained at the resonant frequency. Moreover, our antenna pattern had a steady wideband radiation without beam shift in the passband.

Antenna Design:

The design uses non-radiating parasitic patches for the construction of a single gap coupled three patch antenna (GCTP) for wideband application is designed. Uniform parasitic patches were used for the conventional gap-coupled patch antennas [12]. The design differs here by using stepped patches. Fig.1 represents the structure of GCTP antenna.
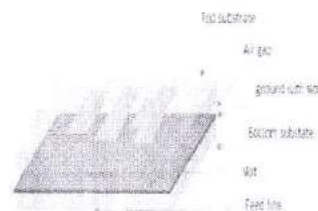

Figure 1: Design structure of proposed GCTP antenna

Step mechanism is implemented in the design so as to realize distinct electric as well as magnetic coupling between the patches. The main patch and the adjacent ones are gap-coupled to each other [13]. The feeding technique used is Aperture coupled feed line with a slot at the top layer of the bottom substrate with an impedance of 50Ω. The feed line is a microstrip given at the bottom layer of the ground plane.

Design Consideration:
GCTP Antenna

This is an advanced design of a non-radiating gap coupled three-patch antenna for wideband applications.

Bounding the Optimal Length of Pliable Index Coding via a Hypergraph-based Approach

Tulasi Sowjanya B., Visvesh Subramanian, Prasad Krishnan

Abstract—In pliable index coding (PICOD), a number of clients are connected via a noise-free broadcast channel to a server which has a list of messages. Each client has a unique subset of messages at the server as side-information and requests for any one message not in the side-information. A PICOD scheme of length ℓ is a set of ℓ encoded transmissions broadcast from the server such that all clients are satisfied. Finding the optimal (minimum) length of PICOD and designing PICOD schemes that have small length are the fundamental questions in PICOD. In this paper, we use a hypergraph-based approach to derive new achievability and converse results for PICOD. We present an algorithm which gives an achievable scheme for PICOD with length at most $\Delta(\mathcal{H})$, where $\Delta(\mathcal{H})$ is the maximum degree of any vertex in a hypergraph that represents the PICOD problem. We also give a lower bound for the optimal PICOD length using a new structural parameter associated with the PICOD hypergraph called the nesting number. Finally, we also identify a class of problems for which our converse is tight.

The full version of this paper, including additional results, proofs, and examples, is available online [1].

I. INTRODUCTION

The problem of *pliable index coding (PICOD)*, introduced in [2] by Brahma and Fragouli, consists of a server with messages, and a number of clients, connected via a noiseless broadcast channel. Each client possesses a subset of messages as *side-information* and demands for *any* message from the set of messages in its *request-set* (those messages not present as its side-information). The server then designs (possibly coded) transmissions and broadcasts them to the clients, which then decode their desired symbols. This is called as a pliable index coding scheme, or a *PICOD scheme*. The number of transmissions made by the server is termed as the *length* of the PICOD scheme, and the goal is to design PICOD schemes with lengths as small as possible. The PICOD problem is a variant of the well-studied index coding problem, introduced in [3] by Birk and Kol. The setting in index coding is different from PICOD only in the sense that each client demands a specific message in the request-set, rather than any message. Apart from being an important problem in information theory, pliable index coding was also shown to be useful for constructing data-shuffling schemes for distributed computing in [4].

In [2], it was shown that finding the optimal code length for PICOD problem is NP-hard. However, via a probabilistic

argument, it was shown in [2] that an achievable scheme with length $\mathcal{O}\left(\min\left(m, n, \log m \left(1 + \log^+\left(\frac{n}{\log m}\right)\right)\right)\right)$ exists, where m is the number of messages at the server and n is the number of clients in the system. This means that $\mathcal{O}(\log^2 n)$ transmissions are sufficient to solve PICOD, when $m = n^\delta$ for some constant δ. Further, algorithms for PICOD were presented in [2], using a greedy approach, via randomized covering, and by utilizing connections to index coding. In [5], Song and Fragouli presented a deterministic algorithm for PICOD via another greedy technique, which constructed a PICOD scheme with at most $\mathcal{O}(\log^2 n)$ transmissions. This remains the state of the art, with respect to deterministic algorithms for achievability in general PICOD problems. Achievability schemes and information theoretic converses for some special classes of PICOD problems were derived in [6], [7]. Converse techniques were further improved in [8], [9] and lower bounds on the optimal PICOD length were presented in the same for general PICOD problems based on their structure.

In [10], Krishnan et al. considered a hypergraph coloring approach to the PICOD problem. A given PICOD problem can be represented by a *PICOD hypergraph* $\mathcal{H}$ with the messages as its vertices, and the request-sets of clients as its edges. Using *conflict-free colorings* [11] of the PICOD hypergraph, it was shown in [10] that there exists a PICOD scheme which achieve length $\mathcal{O}(\log^2 \Gamma)$, where Γ is the maximum number of edges intersecting with any edge. This bound is in general tighter than the one derived in [2], [5], as Γ can be much smaller than n. However, the proof is via a probabilistic argument again, and a deterministic algorithm for constructing a PICOD scheme of length $\mathcal{O}(\log^2 \Gamma)$ is not known so far.

In the present work, we consider the hypergraph model for PICOD introduced in [10] and present new achievability and converse results for PICOD based on this model. After briefly recollecting the formal PICOD system model and the hypergraph framework in Section II, in Section III we show that the optimal PICOD length $\beta(\mathcal{H})$ for a PICOD problem represented by a hypergraph $\mathcal{H}$ satisfies $\beta(\mathcal{H}) \leq \Delta(\mathcal{H})$, where $\Delta(\mathcal{H})$ refers to the maximum degree of any vertex in the hypergraph (i.e., the maximum number of request-sets that any message is present in). This bound is better than the $\mathcal{O}(\log^2 n)$ bound in general, for PICOD hypergraphs in which $\Delta(\mathcal{H})$ is smaller than $\log^2 n$. As a constructive proof of this result, we present Algorithm 1, which uses the greedy approach to achieve this bound and runs in time polynomial in the system parameters. In Section IV, we present a lower bound for $\beta(\mathcal{H})$

Design and Implementation of RNB multiplier Using NP Domino logic

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Abstract— In this paper, a Reordered Normal Basis (RNB) finite field multiplier is implemented using NP domino logic. This multiplier uses RNB, which is the type-II Optimal Normal Basis (ONB), to perform multiplication. The Critical Path Delay (CPD) is influenced by the XOR-AND-XOR (XAX) module of the Serial-In Parallel-Out (SIPO) RNB multiplier. Hence, this block is designed in various logic styles, including, static CMOS logic, pseudo NMOS logic, domino logic, domino keeper logic, and NP domino logic. The Tanner EDA 45nm tool is used to design the multiplier using the full-custom design. The major goal is to determine the optimum logic style that meets the VLSI optimisation requirements like the area, multiplication delay, CPD, power dissipation, Area-Delay Product (APD), and Power-Delay Product (PDP). When compared to other logic styles, the delay and area of the multiplier employing NP domino logic are lower, whereas the power dissipation is similar to other domino logic styles. Also, the architectures of Serial-In Serial-Out (SISO), Parallel-In Serial-Out (PISO), SIPO, and Parallel-In Parallel-Out (PIPO) multipliers were implemented to analyse their efficiencies in terms of design parameters.

Keywords—Reordered Normal Basis, 45nm Technology, Domino Keeper Logic, NP Domino logic.

I. INTRODUCTION

In the realm of communications, Galois Fields (GF) have gained a lot of attention, where Error-correcting codes [1], [2], [3] and cryptography [4] are just a few of the uses. For switching theory and digital signal processing [5], the finite field GF (2^m) is very appealing [6]. As a result, good multiplication and inversion algorithms are required in finite fields [7]. Different bases, like polynomial basis or normal basis, can be used to describe a finite field. In hardware implementations, the normal basis is more efficient because a simple cyclic shift can be used to square a field element over GF (2^m). For cryptosystems that use frequent squaring, this makes the normal basis more desirable [8]. The type-II optimal basis multiplier, also known as the RNB, allows multiplication operation in the closed form but not using matrix operation [9].

In the literature, several potential architectures for sequential RNB multipliers have been presented. Massey-Omura [10] developed an efficient normal basis bit-serial multiplier with 2 XOR and 1 AND plane. It was later extended to bit-parallel architecture. The Gao-Sobelman [11] has the same complexity as the Massey-Omura multiplier except the planes are rearranged as XAX planes. Reyhani-Masoleh and Hasan [12] improvised a Massey-Omura bit-parallel multiplier, but it works only with ONB type-I. With a minor increase in latency, it reduced area complexity.

Namin [13] proposed a SIPO RNB multiplier and used Domino keeper logic to implement the idea. Namin used domino keeper control logic to build the word level RNB of the XAX module. This design was modified [14] to decrease the contention current, which had a significant improvement in functionality at high operating speeds. Rashidi [15] implemented the bit-parallel PIPO multiplier, which was an improved version of the Massey-Omura bit-parallel multiplier. Although the implementations of different logic styles mentioned in the literature were proved to be effective in terms of design parameters, further improvements in area, CPD, multiplication delay, ADP, and PDP can be done using the NP domino logic which are discussed in further sections.

In this paper, the 5-bit SIPO RNB multiplier [13] is implemented. The XAX module of the multiplier is implemented in various logic styles, including static CMOS, pseudo NMOS, domino, domino keeper, and NP domino logic, as it affects the CPD. This multiplier's bit-parallel version (PIPO) is also implemented. To examine the efficiency of each logic style, the design metrics of all logic styles are compared and analysed. In addition to this, Massey-Omura [10] and Gao-Sobelman [11] multiplier architectures having SISO functionality along with their bit-parallel version (PISO) are implemented and their efficiencies in terms of design parameters are analysed.

Section-II pertains to the RNB multiplication process. The functionality of the SIPO RNB multiplier is detailed in Section-III. The various logic styles, along with the NP domino logic, are explained in Section-III. In Section-V, the results and discussions of different multiplier architectures are presented. Section-VI covers the conclusion of this paper.

II. REVIEW OF RNB MULTIPLICATION PROCESS

Let the polynomials A and B that are a part of GF (2^m) be represented in RNB basis [13] $I_2 = \gamma_1, \gamma_2, \ldots\ldots, \gamma_m$, as

$$A = \sum_{i=1}^{m} a_i \gamma_i \qquad (1)$$

$$B = \sum_{i=1}^{m} b_i \gamma_i \qquad (2)$$

The element C which is the multiplication of two elements is stored in the same basis as

$$C = \sum_{i=1}^{m} c_i \gamma_i, \quad \text{where } a_i, b_i, c_i \in F_2 \qquad (3)$$

The product coordinates, c_i are computed as given below:

Implementation Of Unbiased Rounding For 64-Bit Floating Point Adder

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Abstract—Rounding is mostly performed on floating point numbers. Rounding can be made simpler by using HUB format. The HUB based floating point adder is termed as Architecture A. But some bias may be introduced by using the HUB format. Bias occurs while rounding post truncation, when all the bits to be discarded are zeros. This scenario is called a tie condition. A tie condition occurs while rounding in floating-point related operations. The architecture to partially eliminate the bias is proposed in this paper by making slight modifications to the existing HUB floating point adder. The proposed architecture is termed as Architecture A+. FPGA implementation of three architectures - 64-bit conventional adder for floating point numbers, Architecture A and, Architecture A+ have been done. FPGA implementation results of partial unbiased HUB adder for floating point numbers is compared with 64-bit conventional adder for floating point numbers. The results show that the delay has decreased from 0.197ns to 0.182ns (8.24%), power has reduced from 0.94W to 0.86W (9.3%). Along with these the number of LUT's used have decreased from 2894 to 2315 (25%). Hence, the partial unbiased HUB adder is better than conventional floating point adder.

Keywords—Floating-point, HUB, unbiasing, rounding, adder.

I. INTRODUCTION

A basic operation that is required in many arithmetic data-paths is rounding. Most arithmetic operations involving real numbers carry out rounding [1-3]. Rounding is pivotal for the reduction of the significant digits. There are various modes of rounding of which the default in many compilers is the round-to-nearest mode. Even a slight improvement in the efficiency of this circuit affects the efficiency of units that include them. RN (Round to nearest) mode can be simplified by using half-unit-biased (HUB) formats. This new format allows to perform RN just by truncation [4][5].

HUB format is primarily shifting of units in the last place (ULP) by half unit. Such a shifting can be described as padding one implicit LSB (ILSB) to the original number (set to one) [6]. This is so because, for binary digits, a shift by half unit is moving to the midpoint and midpoint of two numbers has 1 in the LSB (midpoint of 1.00 and 1.01 is 1.001). Round-to- nearest operation being performed by simple truncation is a key aspect of HUB format. As this avoids any sort of carry propagation it simplifies two's complement along with RN operations. Thus, saving power consumption and area utilized [7]. Use of HUB format also eliminates the logic related to rounding. The HUB format enhances utilization of resources and speed for all blocks using floating-point numbers. Parallelly, it providesaccuracy equivalent to the conventional formats [8].

But rounding itself may introduce bias when a tie condition occurs while rounding. A tie condition is produced post normalization. In a tie case after truncating the results, all the discarded bits become zero [9]. But having unbiased (i.e., equal chances of rounding up or down in a tie case) rounding is necessary. It removes the drift effect [10] and reduces power.

This work lists the sources of bias and a way to avoid bias in case of aligned addition. As biasing is removed for only one of the sources of bias, the architecture is termed partially unbiased. This architecture is also based on HUB format hence it is called the partial unbiased HUB floating point adder. This architecture can be enhanced to eliminate bias in all the sources of bias.

Section II presents the HUB format for floating point numbers. Section III describes how addition of 64-bit HUB based floating-point numbers takes place. Section IV analyzes the different sources of bias along with architectureto achieve unbiased rounding partially. Next, in Section V results and discussions of the different architectures mentioned in this paper are presented. The last section, Section VI deals with conclusions.

II. HUB FORMAT

HUB based floating-point numbers are like conventional ERN (Exactly Represented Numbers) where unit in last place (ULP) shifts by half unit. Hence these numbers are called 'Half-Unit Biased' (HUB) numbers. Here the exponent remains the same and only the significand differs for HUB format when compared to conventional format. This shifting of the ERNs makes the ILSB i.e., implicit LSB as one. To illustrate, let the significand of the HUB form in case of single precision (IEEE-754 standard) consists of 52 bits. Of these 52 bits the first bit as well as the last bit is set to 1, thus need to store only 51 bits, like in conventional format [3].

$$Mx = 1.Mx - 1Mx - 2 ..... Mx - f 1. \qquad (1)$$

$$1.M\ M\ M\ M\ M\ M\ M\ M\ M\ M\ 1 \qquad (2)$$

$$1.M\ M\ M\ M\ M\ M\ M\ M\ M\ M \qquad (3)$$

Equation (1) describes the HUB based number. Whereas (2) and (3) describe the operational form and representational form, respectively. The main perk with the HUB representation is in calculating two's complement. This is achieved by performing bit-wise inversions also, an equivalent RNE is obtained by simple truncation of the HUB number.

Also, just by appending ILSB to the actual number HUB number can be obtained. Hence, HUB numbers can be

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Implementation of 64-Bit Inexact Speculative Half Unit Biased Floating-Point Adder

Vani Dasu ✉ & K. Ragini

4 Accesses

Abstract

In recent times, arithmetic operations involve very small or large numbers. These operations become easy by using floating-point numbers. Generally, the results of these operations are rounded to the nearest value. But while rounding, an error may occur. Half Unit Biased (HUB) representation is useful in avoiding this error. HUB-based numbers are obtained after the represented numbers are shifted by half a unit in the last place. For HUB-based adders, speed is restricted by how the carry propagates throughout the adder. An idea to study the effect of inexact speculative
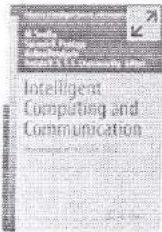
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Analysis of Serial-In Parallel-Out Finite Field Multiplier Using Various Domino Logic Styles

Bhavana Majji ✉ & K. Ragini

Conference paper | First Online: 20 September 2023

Abstract

Digital privacy and authenticity are the main factors that have developed as a result of migration from paper to electronic media. Effective cryptographic solutions are necessary to preserve digital privacy. Reordered normal basis (RNB) is used for cryptographic solutions. In this paper, a 11-bit serial-in parallel-out (SIPO) RNB multiplier is implemented using various domino logic styles. The XOR-AND-XOR (XAX) module is implemented using various logic styles like domino, domino keeper, and NP domino logic in the Tanner EDA tool utilizing the 45 nm technology. The design
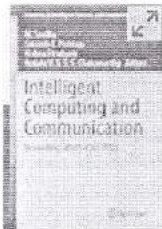
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Dragon Fruit Stem Disease Detection Using Image Processing

Y. Rakesh Kumar ✉, P. Satyanarayana Goud, V. Radha Krishna, Chandra Shaker Arrabotu, V. Samhitha Reddy & G. Sahithi

Conference paper | First Online: 20 September 2023

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Abstract

Dragon fruit is generally tolerant to major diseases concerned; but due to improper knowledge and poor climatic conditions, there might some diseases which effect the growth of the dragon fruit. Detection of these diseases is more significant to avoid any loss to the farmer. Detection of dragon fruit stem diseases manually for large scale farming is difficult and depends on expertise of the farmer on diseases; so a computer-aided method like image processing technique is required. A color features-based multi-threshold segmentation method is proposed, and
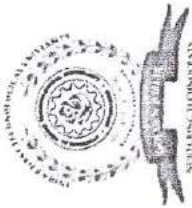
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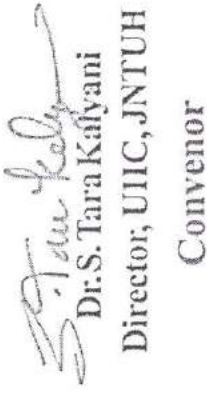
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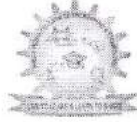
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Data Transmission through Li-Fi in Underwater

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Abstract—In the present scenario for various industrial, scientific and underwater applications high speed wireless communication is desirable. The existing underwater communication technique such as acoustic communication method has high latency and suffer low data rates, whereas RF frequency communication have high attention of signal underwater. The emerging optical wireless communication techniques have offered high data rates in Gbps and visible light promises low attenuation of signal strength which provides high data density. The proposed method deals with the transmission of data underwater through visible light communication. The proposed method designs data transmission model where it transmits text, audio, image through water. The hardware used in this model are Arduino Nano and the transmitter part in the model is the laser light, whereas the receiver part is made of laser receiver. The transmitter follows On Off Keying (OOK) modulation technique where the blinking of laser on determine1's and off as 0's in this way the data is transmitted via line of sight to the receiver underwater. Li-Fi implementation can be executed to achieve rapid information move. In future, the capacity can be increased as per the requirement to transmit high quality image audio using higher rage lasers and photodiodes.

Keywords—Arduino Nano, laser transmitter, laser receiver, OOK modulation, Li-Fi, visible light communication, underwater optical wireless communication.

I. INTRODUCTION

In the recent years where technology has been ruling the world with its high-speed internet services, optical wireless communication can play a crucial role in this sector. Optical wireless communication is capable of providing high data rates with low power and mass requirement and is used in various industrial, space and underwater communication applications. Underwater optical wireless links are less explored as it is more challenging where various physical parameters are to be considered for the data transmission as the underwater environments vary from shallow water bodies to deep oceans. The present technology using acoustic waves for underwater communication links has limited performance due to low bandwidth, high transmission losses, time varying multipath propagation, high latency and doppler spread. These factors lead to temporal and spatial variation of acoustic channel which in turn limits the available bandwidth of the system [1]. It can support data rate up to tens of kbps for long distances (ranging in kms) and up to hundreds of kbps for short distances (few meters). All this has led to the conception of

underwater optical wireless communication (UOWC), as it provides higher data rates than the traditional acoustic communication systems with significantly lower power consumption and simpler computational complexities for short-range wireless links [2]. UOWC has different potential applications ranging from deep oceans to coastal waters.

Light Fidelity (Li-Fi) is the most reliable means of underwater communication for data transmission. This paper determines the better model for underwater data transmission. This model uses visible light source such as LEDs or laser are used as transmitter and photodiodes like LDR or laser receiver are used as a receiver. The visible light source used in this model is the laser transmitter module and laser receiver on the receiver part. The data to be transmitted is processed through Arduino into 1's and 0's and it follows On Off Keying (OOK) modulation [3]. The blinking of laser on determines 1's and off as 0's, in this way the data is transmitted via line of sight to the receiver underwater. Once the data is received is processed to get the information which can be a text, audio or image. This can be a feasible means of communication between the submarines, autonomous underwater vehicles (AUV) and unmanned underwater vehicles (UUV) as it provides high data rates in the range of Gbps.

II. LITERATURE SURVEY

In the recent years, optical wireless communication is being preferred for terrestrial communications, underwater communications for different applications in various fields due to its high-speed data transfer and low equipment requirement. Acoustic waves are widely used for the underwater communication links [4]. Though acoustic communication has improved over the years for better communication in underwater for long distances but it's relatively low data rates, highly varying multipath and propagation delay makes acoustic networks less reliable [5]. The Radio Frequency (RF) communication has high data rates in the terrestrial links. The RF communication in underwater is not preferable as the RF waves get absorbed in the water and the signal gets attenuated [6]. These disadvantages paved a way for the optical wireless underwater communication which succeeds in high data rates, low signal attenuation and less equipment requirement [2]. The visible light is used for the communication in the optical wireless communication called as visible light communication. The visible light spectrum wavelength

Fast and efficient ResNN and Genetic optimization for PVT aware performance enhancement in digital circuits

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Abstract—This paper presents a fast and efficient optimization engine with multi-directional, multi-objective algorithms based on a robust transistor sizing approach to improve digital circuit performance. However, such optimization processes are highly simulator-dependent and computationally expensive tasks. Therefore, we propose developing machine learning-based reliable models considering process and operating variations to speed up the optimization procedure by running them on developed Residual Neural Network (ResNN) models instead of running expensive circuit simulations. Results on 22nm Metal Gate High-K digital cells show a reduction in delay and leakage up to 36.7% and 18.8%, respectively improving computational efficiency by several orders.

Index Terms—Yield optimization, Genetic algorithm, Machine Learning, Leakage power, Propagation delay, CMOS, VLSI

I. INTRODUCTION

For the past few decades, the IC (Integrated Circuit) industry has reinforced the electronic industry in designing and developing low-power, high-speed, complex, and compact devices at a reduced cost. The down-scaling of transistors is one of the phenomenal factors contributing to this development [1]. However, down-scaling to nanometer regime concerns increased static/leakage power dissipation and circuit sensitivity to process variations in manufacturing, challenging state-of-the-art circuit reliability [2]. The inter-die and intra-die variations in a chip are magnifying beyond the 45nm technology node, causing deviations in electrical characteristics of transistors manifested due to physical imperfections during manufacturing, leading to circuit performance deviation affecting the chip yield. The fluctuations in supply voltage and operating temperatures combined with process variations further deviate circuit performance from expected, increasing the threat of functional failures and timing mismatch. The efficient design of an IC confides in the circuit performance optimization in terms of power dissipation, operating speeds, and area. Therefore, PVT-aware circuit optimization with high yield has therefore became an interesting and urgent field of research in recent times.

Under this perception, we propose a PVT-aware multi-objective mathematical optimization engine based on Genetic Algorithm (GA) proficient in exploring the entire design space to find the optimal sizing of all devices in the standard cells

* Equal Contribution

to maximize the yield w.r.t power and speed specifications. Many experts have proposed algorithm-based optimization at various levels in the literature. However, such optimizations are simulation-dependent and computationally expensive tasks. At present, the speed up in analysis is one of the critical requirements of IC manufacturing with the highly demanding time to market scenarios on par with yield enhancement. The problem of improved speed of execution/runtime is possible with incorporating efficient Machine Learning (ML) techniques for circuit analysis and/or optimization. The novelty of this work is in assimilating the cutting-edge optimization algorithms running over the deep Residual Neural Network (ResNN) to improve the computational speed by several orders over simulator-dependent applications.

II. PREVIOUS WORKS

Many research groups and scientists have addressed the reliability optimization of VLSI circuits through algorithmic-based transistor sizing. Beg et al. [3] proposed an automatic optimized transistor sizing method in a feedback control system based on CMOS logic gates with small and large fan-in. Gate-level optimization approaches were mentioned in [4], [5]. Here, all transistors in a given logic gate are scaled by the same factor, and such top-down approaches are deeply circuit-specific, becoming highly complex for larger circuits. This paper addresses this problem with a GA-based bottom-up approach that estimates optimized transistor sizing in each standard cell searching across PVT-aware design space. Transistor-level leakage optimization with critical path delay as bound is proposed in [6]–[11]. In [6], Gupta et al. considered PVT variations for leakage optimization but only for corner cases. The paper optimizes critical path delay and power keeping bounds on both w.r.t nominal values. Abbas et al. proposed yield optimization of CMOS standard cells through transistor sizing at 40nm low-power (LP) technology in [8], [9]. Swarm Intelligence, Spider Monkey Optimization (SMO), are proposed in [10] for leakage optimization of 45nm LP applications. Neighborhood Cultivation Genetic Algorithm (NCGA) and Glowworm swarm optimization (GSO) are proposed in [11] for optimization of critical path delay with average leakage in bound for high performance (HP) applications and leakage power with critical path delay in bound for LP applications, considering all the PVT variations and aging ef-

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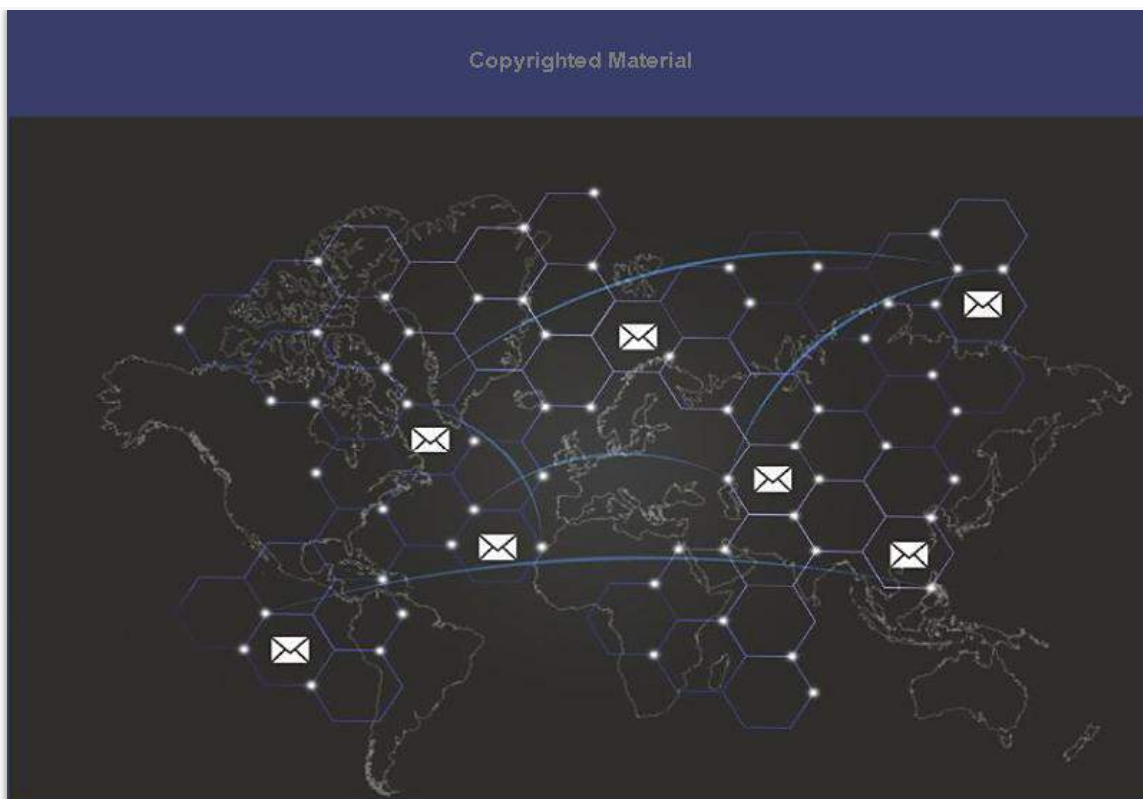
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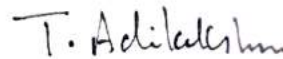**Dr.I.RAVI PRAKASH REDDY**

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Computing Workspot Infection Vulnerability for Sandboxing a Business Process

Supriya Vaddi ✉ , Kollapalli Ramesh Babu & Hrushikesha Mohanty

Abstract

While business continuity plan is for strategic handling of adverse business situations, sandboxing is a proactive strategy to avoid such situations to happen. Particularly, to safeguard a business from pandemic spread due to social contacts, this paper computes the possibility of an infection of a workspot that uses one of the five basic workflow patterns, viz. sequential, concurrent, n-split, n-merge and on-spot-n. A workspot with a high vulnerability of an infection can be put under sandboxing for making a business process resilient.

Keywords

Business process   **Sandboxing**   **Workspot infection**

Business continuity plan   **COVID-19**   **Contact vulnerability**

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References

1. Lam W (2002) Ensuring business continuity. IT Prof (May–June):19–25

2. Cerullo V, Cerullo MJ (2004) Business continuity planning: a comprehensive approach. Inf Syst Manag 23(3):70–78

3. Pradabwong J, Braziotis C, Pawar KS, Tannock J (2015) Business process management and supply chain collaboration: a critical comparison. Logist Res 8(6):2015. https://doi.org/10.1007/s12159-015-0123-6

4. Rowan NJ, Laffey JG (2020) Challenges and solutions for addressing critical shortage of supply chain for Personal and Protective Equipment (PPE) arising from Coronavirus disease (COVID-19) pandemic case study from the Republic of Ireland. Sci Total Environ 725:138532

5. Ahmed M (2020) Towards 'gresilient' supply chain management: a quantitative study. Resour, Conserv Recycl 155:104641. https://doi.org/10.1016/j.resconrec.2019.104641

6. Labarthe O, Ferrarini A, Espinasse B (2006) Multi-agent modelling for simulation of customer-centric supply chain. Int J Simul Process Model 2(3/4). https://doi.org/10.1504/IJSPM.2006.012643

7. Aitsi-Selmi A, Egawa S, Sasaki H, Wannous C, Murray V (2015) The Sendai framework for disaster risk reduction: renewing the global commitment to people's resilience, health, and well-being. Int J Disaster Risk Sci 6(2):164–76

8. Djalante R, Shaw R, DeWit A (2020) Building resilience against biological hazards and pandemics: COVID-19 and its implications for the Sendai Framework. Prog Disaster Sci 6:100080. https://doi.org/10.1016/j.pdisas.2020.100080

9. Ding W, Levine R, Lin C, Xie W (2020) Corporate immunity to the COVID-19 pandemic, Posted on 17th April 2020. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3578585

10. Margherita A, Heikkilä M (2021) Business continuity in the COVID-19 emergency: a framework of actions undertaken by world-leading

companies. Bus Horiz 64(5):683–695, ISSN 0007-6813,
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A Dependable and Secure Communication Infrastructure for Sensor Networks

A. Vijaya Krishna, I. Ravi Prakash Reddy, A. Anny Leema & M. Dinesh ✉

Conference paper | First Online: 20 September 2023

11 Accesses

Abstract

The military, health care, home automation, remote monitoring, and many industries make use of Internet of Things (IoT), a newer era of WSNs devices. Device security has risen to the top of the priority list as a result of their widespread use and recent significant distributed denial of service (DDoS) attacks involving huge of these devices. Because these wireless devices have limited power resources, the security solution must also be energy efficient. Because both users and attackers have remote management or access capabilities can attack on IoT devices. We created a secured communication system for these LoWPAN devices in this study. We created and implemented a one-of-a-kind security solution for detecting and preventing RPL attacks in IoT. We examined how long the batteries in IoT devices lasted and how much energy they consumed before and after we implemented our suggested repair. Using received signal strength indicator (RSSI) tunneling, the proposed security technique detects and corrects routing protocol layer (RPL) issues.

Keywords

IoT   **WSNs**   **Attacks**

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References

1. Kumar M, Verma S, Lata K (2015) Secure data aggregation in wireless sensor networks using homomorphic encryption. Intl J Elec 102(4):690–702

2. Shahzad MK, Ho Cho T (2017) An energy-aware routing and filtering node (ERF) selection in CCEF to extend network lifetime in WSN. IETE J Res 1–13. https://doi.org/10.1080/03772063.2016.1241721

3. Wang T-Y, Cheng Q (2008) Collaborative event region and boundary-region detections in wireless sensor networks. IEEE Trans Sig Process 56(6):2547–2561

4. Usman MR, Shin SY (2016) Channel allocation schemes for permanent user channel assignment in wireless cellular networks. IETE J Res 62(2):189–197

5. Wang TY, Yang MH, Wu JY (2014) A sliding window approach for dynamic event-region detection in sensor networks. In: 2014 International conference on information science, electronics and electrical engineering, vol 3. IEEE, pp 2025–2028

6. Yin J, Hao Hu D, Yang Q (2009) Spatio-temporal event detection using dynamic conditional random fields. In IJCAI 9:1321–1327

7. Cheng H, Su Z, Loret J, Chen G (2014) Service oriented node scheduling schemefor wireless sensor networks using Markov random field model. Sensors 14(11):20940–20962

8. Noura A, Mehedi Hassan M, Ykhlef M, Fortino G (2019) An efficient event matching system for semantic smart data in the internet of things (IoT) environment. Future Gener Comput Syst 95:163–174

9. Michele M, Aoudia FA, Gautier M, Berder O, Benini L (2017) WULoRa: an energy efficient IoT end-node for energy harvesting and heterogeneous

communication. In: Proceedings design, automation and test in Europe conference and exhibition (DATE), pp 1528–1533

10. Saritha V, Nagaraju D (2020) Energy-aware dynamic task offloading and collective task execution in mobile cloud computing. Int J Commun Syst 33(13):27–39

11. Xianjiao Z, Xu G, Zheng X, Xiang Y, Zhou W (2018) E-AUA: an efficient anonymous user authentication protocol for mobile IoT. IEEE Internet Things J 6(2):1506–1519

12. Gao T, Zhang L, Gai Y, Shan X (2007) Load-Balanced cluster-based cooperative MIMO transmission for wireless sensor networks. In: Proceedings 4th international symposium on wireless communication systems, pp 602–606

13. Heinzelman WB, Chandrakasan AP, Balakrishnan H (2002) An application-specific protocol architecture for wireless microsensor networks. IEEE Trans Wirel Commun 1(4):660–670

14. Saravanakumar R, Susila SG, Raja J (2010) An energy efficient cluster based node scheduling protocol for wireless sensor networks. In: Procedings 10th IEEE International conference on proceedings solid-state and integrated circuit technology (ICSICT), pp 2053–2057

15. Smaragdakis G, Matta I, Bestavros A (2004) SEP: a stable election protocol for clustered heterogeneous wireless sensor networks. Boston University Computer Science Department Technical Report

16. Faisal S, Javaid N, Javaid A, Khan MA, Bouk SH, Khan ZA (2013) Z-SEP: zonal-stable election protocol for wireless sensor networks. J Basic Appl Sci Res 3(5):132–139

17. Al-Janabi S, Samaher A-J, Al-Shourbaji I, Shojafar M, Shamshirband S (2017) Survey of main challenges (security and privacy) in wireless body area network

18. Anastasi G, Falchi A, Passarella A, Conti M, Gregori E (2004) Performance measurements of motes sensor networks. ACM MSWiM, pp 174–181

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Abstract—5G Generation connections, which have many novel features compared to Four-G connections, will be dispatched authoritatively very soon. Between 2027 and 2030, it is anticipated that the sixth-generation wireless communication system, utilising the entirety of artificial intelligence, will be implemented. In addition to 5G, there are a number of fundamental challenges that must be addressed, including increased scheme capability, higher data rates, and improved quality of service (QoS). This accessible manuscript discusses upcoming 6G wireless technology and its situation. Emerging technologies such as artificial intelligence and optical wireless technology are discussed. With 6G, mobile networks are anticipated to become one hundred times faster. As 6G expands beyond terrestrial networks and into space, it will enable new scenarios and services with terabytes of data traffic, enabling unprecedented human-machine interaction. 5G is intended to provide peak data rates of 20 Gigabits per second (Gbps) and average user experience rates of 120 Megabits per second (Mbps). It is anticipated that 6G speeds will be closer to 1,000 Gbps and 1 Gbps, respectively. 6G enables options such as holographic communication à la Star Trek and X reality (XR, which integrates AR, VR, and Mixed Reality). One of the goals of 6G cyberspace will be to deliver messages with a microsecond delay as opposed to a 1000-period delay. The 6G technology is enhanced by the combination of artificial intelligence and machine learning (AI), Using sub-mm waves, the 6G significantly influences the calculated communication capability for location determination. Using sub-mm Wave (e.g., wavelengths less than one millimetre) in conjunction with frequency selectivity to determine comparative electromagnetic incorporation charge will lead to significant advancements in wireless sensing technology. In terms of 5G, the calculation of mobile edge computing (MEC) is merely the tip of the iceberg. By the time 6G networks are established, it will be simpler to incorporate computation into collective communication and arithmetic. This generation continues to evolve in response to more distributed radio access networks (RAN) and the desire to utilise the terahertz (THz) range to further extend functionality, reduce latency, and improve spectrum sharing efficiency. It is expected that application 6G will find widespread use in the administration and production of emulsions. Clearly, 5G development communications are more uniform, and global spending has begun. Academic cooperation has started to incubate the next generation of wireless communication systems (namely 6G) in fields such as community security, health monitoring, and space excellent capabilities in order to further the development of wireless networks. Sixth G intended to provide the foundation for the stratification of communication needs in the 2030s.

Keywords—5G, 6G, Artificial Intelligence, Past 5G, Data speed, Enormous connectivity, Terahertz.

I. INTRODUCTION

A. Introduction of 5 G & 6G

It is expected that the forthcoming fifth-generation (5G) and sixth-generation (6G) wireless communication networks will be more advanced by comparison to the current fourth-generation (4G). There are a few important and ordinary issues related to 5G and 6G communication network assessment excellence that are eminently large in accordance. Low latency, high security, small-control usage, big difference between occurrences, and reliable association. There is no doubt that 6G will provide many folds better performance than 5G communication for these issues.

This article discusses how optical wireless methods, which include observable ray communication, brightness stewardship, optical communication and space complementary space optics communication, will be an important part of a successful 5G/6G and Internet of Things scheme. A number of outstanding features of optical wireless communication (OWC) automations have troubled wide range learn observe in recent years [1–5]. "OWC" stands for optical wireless connectivity.

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
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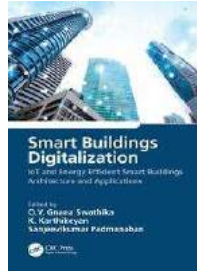Policies   ⌄

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Modelling and Simulation of Grid-Connected Reconfigurable Solar Converter and Wind Hybrid Power System

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P. Tejaswi ; Kalpana Mamidi   **All Authors** •••

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Abstract:
This paper describes a hybrid power system that uses solar PV and wind as power sources that are interfaced to the grid to provide a continuous power supply with lower harmonic distortions. The system possesses a single-stage topology thus, reduces size, loss and cost of the converter. This kind of topology avoids unnecessary double power conversion stages to reduce power losses and improves the harmonic profile by isolating DC type of loads to DC side and the AC type of loads to AC side. The analysis is done based on PI (Proportional-Integral) controller on wind side and Electric Spring controller on solar side to control grid voltages for compensating reactive power. The hybrid system enhances the system efficiency and has greater energy balance in the supply. Initially, simulation is done for single-stage solar converter named as Reconfigurable Solar Converter (RSC) with PQ control technique for various loads. Furthermore, this model is integrated with wind power system making it a hybrid model. Then, three-phase Induction Motor is connected to the local grid as a non-linear load. The results are achieved using MATLAB/Simulink software for a grid-connected hybrid power system with non-linear load.

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BER Analysis of MIMO-OFDM System using STBC and V-BLAST

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ABSTRACT: Orthogonal Frequency-Division Multiplexing (OFDM) divides a single information stream into several closely spaced narrowband sub channel frequencies, reduces interference in the system, and allows for more bandwidth of data. The wireless technology called Multiple Input-Multiple Output (MIMO), applies more than one sending and receiving antennas. MIMO boosts capacity of data in wireless communication systems. The same data is delivered across several antennas with same path and in the same bandwidth in a MIMO system. For 4G and 5G broadband wireless communications, MIMO with FDM is the most best air interface. It has the best spectral efficiency, large data capacity and high data throughput. If space-time coding methods are used along with many sending and receiving antennas, that increases data rate over wireless channels. Hence it is possible to obtain the capacity limit of Shannon Theorem. Vertical - Bell Laboratories Layered Space-Time (V-BLAST) algorithm

1. Introduction:

Multiple Input-Multiple Output (MIMO) technique for wireless communication, applies multiple sending and receiving antennas for enhancing data capacity. Data is delivered across several antennas along the same path [12] and in the same bandwidth in a MIMO system [5]. In MIMO system, multiple users use the same communication channel. Hence, the signals of multiusers may interfere with each other [1]. This necessitates the usage of detection

Mohammed El Ghzaoui ·
Sudipta Das · Trupti Ranjan Lenka ·
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Terahertz Wireless Communication Components and System Technologies

Springer

Contents

A 10-Element Series Fed Non-uniform High Directional Planar Antenna Array at 0.3 THz

Anveshkumar Nella, Manish Sharma, Vulugundam Anitha, and Tathababu Addepalli

Abstract This work presents a design of 10-element symmetric series fed non-uniform planar antenna array operating at 0.3 THz and exhibiting high directional radiation pattern along the upper hemisphere. An impedance bandwidth of range 0.294–0.313 THz and a peak gain (dBi) of 13.26 at 0.3 THz are noted. Gold material of thickness 5 μm and silicon dioxide (SiO_2) dielectric substrate of 2 mm $\times$ 5.5 mm $\times$ 0.06 mm dimensions are employed for the proposed antenna array design. Array elements length is considered as quarter of free space wavelength at 0.3 THz while elements width is non-uniform for better impedance bandwidth and directivity. Initially, a 10-element series fed non-uniform array antenna, utilizing the concept of Tschebyscheff polynomials and array factor, is presented. Then, an optimized 10-element series fed antenna array, offering better performance, is discussed. Considering the compact dimensions, higher directivity, resonating characteristics, and better performance proposed antenna array can be a suitable module for various THz applications like imaging, radars, device-to-device communication, THz Wi-Fi, point-to-point communication, etc.

Keywords Array factor · Directional radiation pattern · Non-uniform elements · Series fed · THz applications · Tschebyscheff polynomials

1 Introduction

Micro-strip patch antennas have played a vital role in several microwave band applications, which include applications such as Wi-MAX, WLAN, GPS, Bluetooth, UWB, *X*, *K*, and Ku Bands. The utilization of these antennas based on micro-strip feed has been extended for applications in THz range, which are useful for medical

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A Planar High Directional Bow-tie Yagi-Uda Antenna for Compact THz Wireless Devices

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Abstract —In this proposed work, a high directional planar bow-tie yagi-uda antenna, operating within 0.245 - 0.321 THz band, is proposed for compact THz wireless devices. This antenna employs gold material of thickness 5 µm as conducting material while silicon dioxide is used as a dielectric substrate having compact dimensions of 1mm×1.35mm×0.06mm. Parasitic elements are used as directors to enhance the directional properties. Maximum peak gain of the antenna is found to be 11.8dBi at 0.321 THz within the -10dB impedance bandwidth range. Exhibiting compact dimensions, high directivity, better performance and simple design lead to a suitable module in compact THz devices for various millimeter wave and THz applications.

Keywords— Bow-tie antenna, communication, gain, high directional, millimeter wave, THz technology.

I. INTRODUCTION

Electromagnetic (EM) spectrum between 300 GHz - 30 THz, wavelengths of 1 mm to around 10 µm, is referred to as Terahertz (THz) radiation, commonly known as T-Rays. The unique properties of THz radiation are recently exploited due to availability of commercial sources for terahertz radiation [1]. Terahertz communication, with its huge accessible bandwidth, is a potential option for delivering high data rates in wireless communications. The new standard IEEE 802.15.3d [2] recognizes this fact by allocating the frequency band from 0.252 - 0.325 THz for future wireless networks communication. The H-Band 0.220 - 0.320 THz, a frequency region between millimeter waves and terahertz radiation, is likewise becoming increasingly appealing due to affordable and readily available components. Pico-cellular short range indoor communication systems can work in atmospheric transmission-windows at 0.30 or 0.35 THz despite of severe path losses. The unusually large bandwidth available from 0.275 - 3 THz, revealed by the FCC frequency allotment chart [3], has recently drew a lot of interest to frequency bands around 300 GHz. Applications in this frequency range include radar [4], communication [5] as well as security, defense, commercial, and imaging. Front- and backhauling are few of the most vibrant applications for terahertz communication.

Literature [6-18], presents several millimeter-wave and THz antennas for numerous wireless applications. In the sub-millimeter wave and THz bands, printed reflect arrays are utilized to obtain a collimated beam [6]. Three parallel-dipoles, incorporated at one side of a 110 µm quartz wafer, make up the reflect array cells. In practical, a linear-phase variation is obtained in the range of more than 360° frequencies ranging from 0.280 - 0.320 THz. At 300 GHz,

three different types of high-gain antennas, namely rectangular horn, cassegrain, and off-set parabolic are developed and tested [7]. Theoretically, a peak gain of 25 dBi is determined. In [8], the antenna is processed on quartz and it comprises of two-quartz layers with two-metal layers each separated by benzocyclobutene (BCB). The antenna exhibits a simulated gain of around 10 dBi and a bandwidth of over 30 GHz. In [9], a 300 GHz dielectric lens antenna is introduced as an on-chip antenna to improve gain and to reduce the substrate losses effects. At 0.30 THz, the substrate polytetrafluoroethylene (PTFE) has a relative permittivity of about 2.1 and a loss tangent of about 0.001 [10]. When coupled to a WR3.4 waveguide the antenna gain of lens is about 21.2dBi. In [12], it is proposed that the THz antenna and THz circuit be integrated in the package that contains the THz chip, i.e. a 0.3 THz differential microstrip grid array antenna, with the antenna-in-package module being integrated in low temperature co-fired ceramic (LTCC). It has good performance at 300 GHz, with 14.9 percent impedance bandwidth, 12.3% gain bandwidth, and 13.7dBi gain. For various wireless applications, many bow-tie and planar yagi-uda antennas are presented in the literature [19-22]. A planar high directional bow-tie yagi-uda antenna working in the frequency range of 0.245 – 0.321 THz is shown in the proposed study. To improve directional qualities, parasitic components are used as directors. The entire operational band has a peak of greater than 9 dBi.

II. PROPOSED WORK

A planar bow-tie yagi-uda antenna with gold as a conducting material and silicon dioxide as a dielectric material is proposed. Gold has a thickness of 5 µm while the substrate is with 60 µm. The proposed structure on a substrate of dimensions 1mm×1.35mm×0.06mm is incorporated as shown in Fig. 1. Detailed dimensions are listed in Table I.
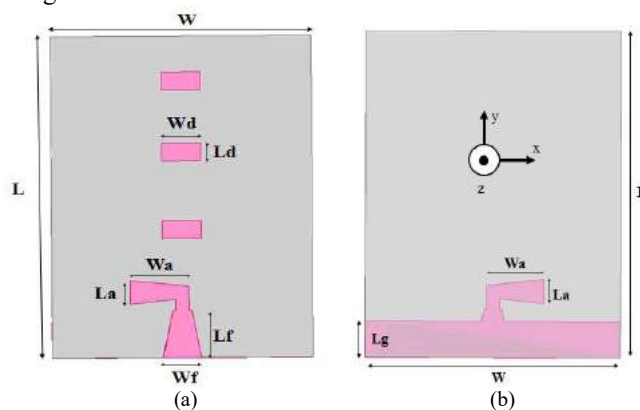
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Abstract:
Image inpainting is a method that focuses to fill the disappeared regions to restore the images back to provide a
complete meaningful image. However, the classical methods still struggle with solving the data loss problem because
of object and its background. This research analyzes the performance of inpainting model using K-Nearest Neighbor
(KNN)-based search method with Bhattacharya distance and the patch extraction is performed using the concept of
Bhattacharya distance. Here, the analysis is done by varying the patch size in KNN-based search model for the
considered image depending on the percentage of scratch. Moreover, the performance is estimated by considering
metrics like Peak Signal-to-Noise Ratio (PSNR), Structural Similarity Index Measure (SSIM), Second-Derivative-like
Measure of Enhancement (SDME), Universal image Quality Index (UQI), Multi-Scale Structural Similarity (MS-SSIM)
and Mean Square Error (MSE). From the analysis, it is clear that the KNN + Bhattacharya distance provides effective
performance with respect to evaluation metrics and also shows higher efficiency when compared with any other
traditional approaches. When the percentage of scratch is 100%, the MSE attained by KNN + Bhattacharya distance
with patch size 20x20 is 0.190, MS- SSIM is 0.925, PSNR is 29.01, SDME is 69.02, SSIM is 0.914, UQI is 0.190 for
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Performance Evaluation of Biharmonic Function-Based Image Inpainting Approach

Manjunath R. Hudagi ✉, Shridevi Soma & Rajkumar L. Biradar

Conference paper | First Online: 01 October 2022

Part of the Smart Innovation, Systems and Technologies book series (SIST,volume 311)

Abstract

Image inpainting states to restoring misplaced procedure or damaged regions in an image. Image inpainting is a procedure of returning corrupted and old images. The major intention of this research is to analyze and justify the effectiveness of the image inpainting technique. Accordingly, performance analysis of image inpainting model is performed through Biharmonic functions.

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A REVIEW ON NATIONAL EDUCATION POLICY – REFORMS IN HIGHER EDUCATION

M. Sreevalli[1], B. Mrinalini[2]

ABSTRACT

Education has a key and decisive role in this scenario of contingencies. The National Education Policy (NEP) 2020 has therefore been transformed into the framework of this reform, which could help to build a new education system in the country, in addition to strengthening those economic and social indicators. The National Education Policy 2020 (NEP 2020), which was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The new policy replaces the previous National Policy on Education, 1986. The NEP 2020 enacts numerous changes in India's education policy. It aims to increase state expenditure on education from around 4% to 6% of the GDP as soon as possible. The present paper focused on various reforms in higher education in National Education Policy.

Key Words: NEP, GDP, economic and social indicators

INTRODUCTION

The National Education Policy (NEP 2020), launched on 29 July 2020, outlines the vision of India's new education system. NEP 2020 focuses on five pillars: Affordability, Accessibility, Quality, Equity, and Accountability – to ensure continual learning. It has been crafted consistent with the needs of the citizens as a demand for knowledge in society and economy called for a need to acquire new skills on a regular basis. Thus, providing quality education and creating lifelong learning opportunities for all, leading to full and productive employment and decent work as enlisted in United Nations Sustainable Development Goals 2030, forms the thrust of NEP 2020. The new policy replaces the previous National Policy on Education, 1986 and forms a comprehensive framework to transform both elementary and higher education in India by 2040.

The NEP 2020 calls for key reforms in both school and higher education that prepare the next generation to thrive and compete in the new digital age. Thus, there is much emphasis upon

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# Creating Lesson Plans for a Flipped Classroom: Some Insights

Dr. B. Sushma, Assistant Professor of English,

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Hyderabad.

Abstract:

With the rapid increase in the use of technology for teaching students online during the pandemic of Covid-19, it has become inevitable for teachers and learners to learn to use technology effectively in their classrooms. It is not just the teachers who should be equipped with the online resources and technologies to be used, but even the learners need to know how to use the various forms of technologies available for attending classes online. In this scenario, a flipped classroom serves best. The learners get to read e-content, watch online videos, design posters, draw mind maps using some software and participate well during the classroom session. This paper thus discusses how teachers can plan their flipped classrooms, how they can make their lesson plans for a flipped classroom and conduct the activities in the real classroom environment or even virtual classrooms. This paper tries to explain the process of making lesson plans in step by step process.

Keywords: Flipped Classroom, Virtual Classroom, Lesson Plan, E-resources, and Technology.

The word, 'Flipped' in 'Flipped Classroom' denotes the other side of a Classroom. In the traditional or conventional Classroom, the teacher usually teaches, gives instructions and asks the learners to do the homework for the next class. In a flipped classroom, the homework that has to be done by students is done in the classroom itself. It means to say that, the teacher has to make students participate in classroom by giving the same tasks which were once done individually at home, in the classroom itself. This makes the learners target-free and they can interact well in the classrooms. Their speaking skills, confidence levels, team skills, collaborative skills also improve with more activities done in the classroom. There would not be a lecture delivered in the class and the students discuss the topic among themselves, the teachers being the facilitator facilitating the discussions. Due to this, a lot of peer interaction,
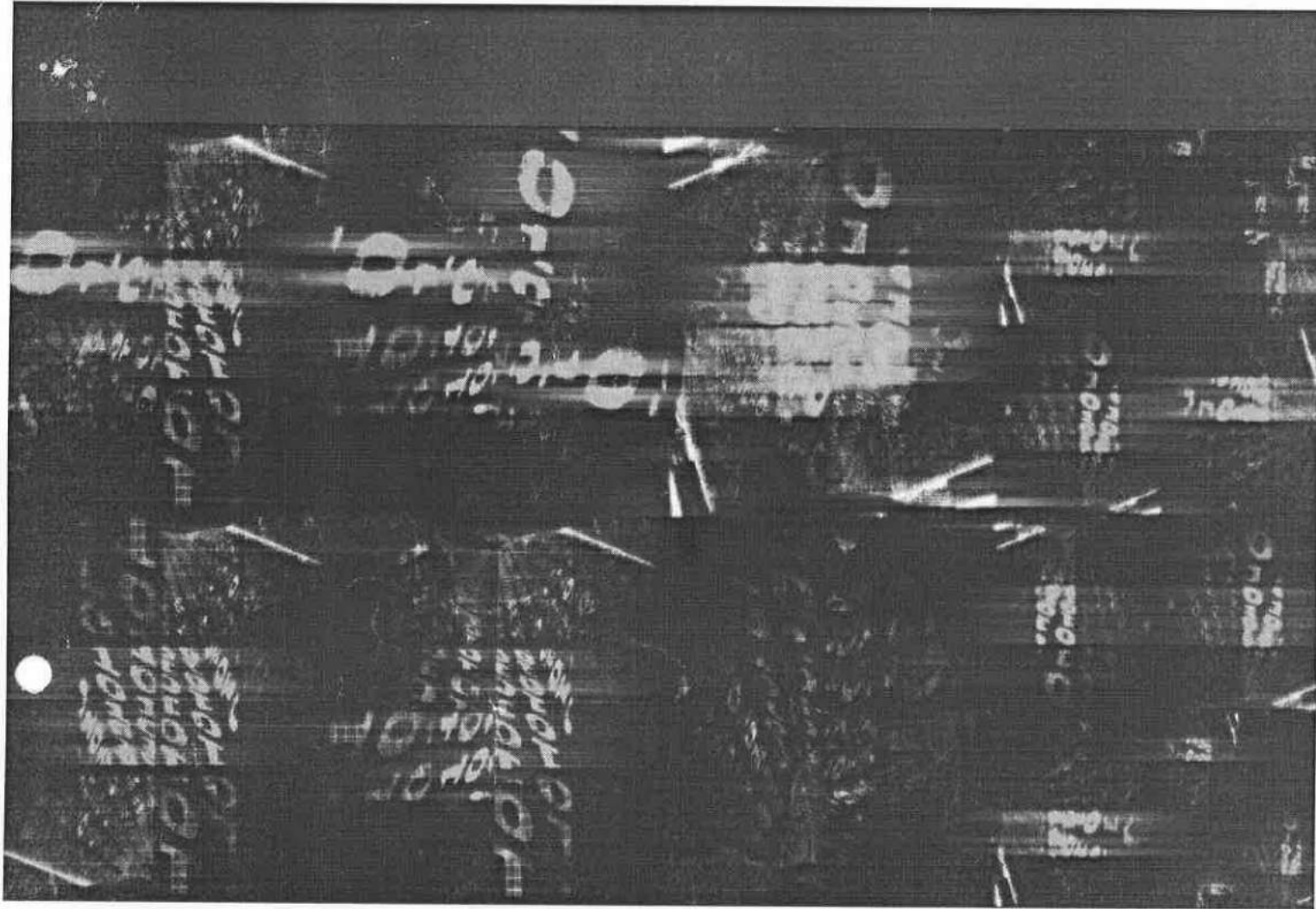
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Keshava Reddy E.
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Improvements over Fuzzy clustering methods for large Datasets

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Improvements over Fuzzy clustering methods for large Datasets

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Fuzzy C-means and kernel FCM-F are multi scan methods and require NC distance computations where N is the size of the dataset D, C is the number of cluster centers in the data and Kernel FCM-K also is a multi scan method requiring N2C distance computations in each iteration. For large values of N, the overall computation cost will go on increasing for these methods. The Book proposed two-step prototype based hybrid techniques to speed-up FCM, KFCM-F and KFCM-K. The proposed algorithms are called Prototype based FCM (PFCM), Prototype based KFCM- F (PKFCM-F) and Prototype based KFCM-K(PKFCM-K). Initially, few prototypes are generated from the given dataset and later the conventional

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15. Artificial Intelligence in Agriculture

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In India Agriculture plays a vital role and also plays an important in Indian economy growth. Crop production was carried out based on knowledge passes from generation to generation. Technology has redefined farming over the years and technological advances have affected the agriculture industry in more ways than one. Agriculture is the mainstay occupation in many countries worldwide and with rising population, which as per UN projections will increase from 7.5 billion to 9.7 billion in 2050. there will be more pressure on land as there will be only an extra 4% of land, which will come under cultivation by 2050. This means that farmers will have to do more with less. According to the same survey, the food production will have to increase by 60% to feed an additional two billion people. However, traditional methods are not enough to handle this huge demand. This is driving farmers and agro companies to find newer ways to increase production and reduce waste

Due to huge growth in population human based cultivation is not enough to meet the demanding need. Machine learning is an important decision support tool for crop yield prediction, including supporting decisions on what crops to grow and what to do during the growing season of the crops. Several machine learning algorithms have been applied to support crop yield prediction research.

Keywords: Agriculture, Crop Suggestion system, Farming, Prediction. Soil, Crop Robotics.

BUSINESS INTELLIGENCE AND ITS APPLICATIONS

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DR. SUBHASRI R
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MATHEMATICS AND ARTIFICIAL INTELLIGENCE ITS APPLICATIONS

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Abstract:
Artificial Intelligence is an Important and existing field in the research area containing more opportunities in the field of mathematics and enormous applications to various branches of science. Similarly major contributions in AI area related to mathematics, means that mathematics statistics and mathematicians statisticians plays vital role in contributing good results in AI. AI algorithms have attracted close attention of researchers and have also been applied successfully to solve problems in Engineering, mathematics, it consumes considerable computation time due to its stochastic features of the searching process. In this paper describing applications in various fields of Mathematics in Artificial Intelligence.

Key Words: Mathematics, Computers Artificial Intelligence Machine Learning, Statistical Tools.

Introduction:

Learning of computers and mathematics are often looking disconnected areas when they are indeed two necessary and complementary branches of the same tree.Invidually each produces routine results but while both disciplines are linked it gives immense results in performing tasks associated with specific tasks so that Artificial Intelligence in this limited sense found applications in diverse fields.

Artificial Intelligence is the abilityof computer programor amachine tothinkandlearn .it is alsothe fieldof study which tries to make computers smarttheyworkon theirown withoutbeing encoded with commands.The termArtificialIntelligence means a programwhich mimics human cognition toassociate with other minds.Such as learning and problemsolving can bedonethrough computers.Andreas kalpan and Michel haenlien define AI as a system'sability to correctly interpret externaldata, tolearn fromsuch data and tousethelearnings to achieve specific goals and tasks through flexible adaptation..

QUALITY IMPROVEMENT USING SIX SIGMA

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HYDRO DYNAMIC STUDIES OF PRESSURIZED FLUIDIZED BED GASIFIER (PFBG)

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Due to the rapid increase in the usage of automobiles and other heavy vehicles there is a lot of demand for the conventional fuels whose reserves are depleting in a rapid manner. Hence the Diesel engines with better fuel economy and high Brake Power output significance has been increased. Diesel engines are used for bulk movement of goods, powering stationary/mobile equipment, and to generate electricity more economically than any other device in this size range. The emissions caused by diesel engines such as CO_2, CO, NOX and HC have to be considered. To reduce the emissions the properties of the present fuel have to be improved. Thus Alternate fuels came into main role since there is a great demand for the fuels which give higher power output with low emissions. The Non edible oils which are derived from vegetables are very hopeful alternate fuels for diesel engines because they are renewable, clean burning and have properties analogous to diesel. This book is about Experiment carried out on the single cylinder 4-stroke CI engine using Waste cooking oil as biodiesel using pyrogallol as Anti-oxidant.
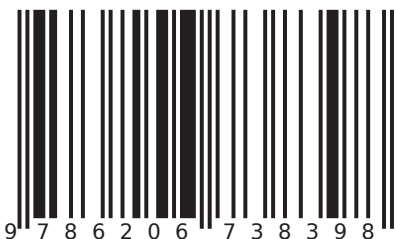
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Duddela Niharika

Performance of CI Engine Fuelled with Waste Cooking Oil as Biodiesel

PYROGALLOL AS ANTIOXIDANT

The quantification of biases in surface temperature prediction of the Climate Forecast System version 2(CFSv2) model is characterized over India in general and over North West region of India in particular, during winter months (i.e. December-January-February [DJF]). Statistical analyses such as time series, temperature biases, percentage departure, root mean square error, etc. are carried out to know the bias characteristics of CFSv2 and CFSR.

P.M.S. Hallika

Sandeep Pattnaik

P.M.S. Hallika with a post-graduate degree from I.I.T. Bhubaneswar and a graduate degree from Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology is currently working as an Assistant Professor at G. Narayanamma Institute of Technology and Science (for women) .

Surface Temperature Data over Indian Region

Determination of Biases in CFSV2 And CFSR Data

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