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ICAESM 2021

INTERNATIONAL CONFERENCE ON

Advances in Engineering, Science and Management

25th - 26th March 2021 | Nagpur

Organized By

Wainganga College of Engineering & Management (WCEM), Nagpur

and

Institute For Engineering Research and Publication (IFERP)

ICAESM-2021

International Conference on
Advances in Engineering, Science and Management
(Virtual Conference)

Nagpur, India

25th - 26th March, 2021

Organized by:

Wainganga College of Engineering & Management (WCEM), Nagpur

&

Institute For Engineering Research and Publication [IFERP]

Rudra Bhanu Satpathy
Chief Executive Officer
Institute For Engineering Research and Publication.

On behalf of ***Institute For Engineering Research and Publications (IFERP)*** and in association with ***Wainganga College of Engineering & Management (WCEM),*** Nagpur, India. I am delighted to welcome all the delegates and participants around the globe to ***Wainganga College of Engineering & Management (WCEM), Nagpur, India*** for the "***International Conference on Advances in Engineering, Science and Management (ICAESM-2021)"*** Which will take place from ***25th - 26th March'2021***

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

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

Sincerely,

Rudra Bhanu Satpathy

Preface

The ***"International Conference on Advances in Engineering, Science and Management (ICAESM-2021)"*** is being organized by ***Wainganga College of Engineering & Management (WCEM),*** Nagpur, India in Association with ***IFERP-Institute for Engineering Research and Publications*** *on the 25th – 26th March, 2021*.

Wainganga College of Engineering & Management has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the major city of Nagpur in Maharashtra.

The ***"International Conference on Advances in Engineering, Science and Management"*** was a notable event which brings Academia, Researchers, Engineers, Industry experts and Students together.

The purpose of this conference is to discuss applications and development in area of **"Engineering, Science and Management"** which were given International values by ***Institute for Engineering Research and Publication (IFERP).***

The International Conference attracted over 180 submissions. Through rigorous peer reviews 48 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

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

ICAESM -21

Message from Director

Dr Bharat Chede

Director, WCEM

Warm and happy greetings to all. I am immensely happy that our College is organising a International Conference on Advances in Engineering Sciences and Management (ICAESM-21) on 25th and 26th March 2021 at WAINGANGA COLLEGE OF ENGINEERING AND MANAGEMENT in association with Institute for Engineering Research and Publication (IFERP), Chennai.

Under the able guidance of our management WCEM continue to march on the way of success with confidence. The Sharp clear vision and precise decision-making power of our management has benefited our college to stay competitive.

I am confident that discussion and publication is continues process that will bring opportunities amongst the academician, corporate, delegates, research scholar and students to present their innovative ideas most up to date finding and technical proficiency in field of Engineering Sciences and Management.

I am looking forward to meeting you in WCEM during ICAESM-21 and to share a most pleasant, interesting and fruitful conference.

Message from Principal

Dr.D.R. Tutakane

Principal, WCEM

International Conference on Advances in Engineering, Science and Management (ICAESM) being organized at Wainganga College of Engineering & Management Nagpur India on 25-26 March 2021. ICAESM provides a highly technical environment and a platform for Industry experts, researchers, innovators and academicians to join together and share their experiences and ideas to enrich scientific temper technical knowledge and Management skills and at the same time provides a step towards "Atma Nirbhar Bharat" .

Wainganga College of Engineering and Management (WCEM) Dongargaon, Nagpur is a fast growing, advancing, and developing premier institution of this region, imparting technical and Management education with applied skills.We strive to make technical education appear simple, awesome interesting, and innovative. with the help of a combination of theory and Practicals, industry application oriented projects and in-house facilities to make projects leading to Patents, research papers, and state of the art Make in India products.

Our endeavor is to generate technical and commercial capabilities in our students to rise from zero to infinite through techno commercial skills and innovation.

WCEM encourages, entrepreneurship, nurturig novel ideas through application oriented projects to cater to the need of the society in general and industries in particular.

I,on behalf of WCEM take this opportunity to heartily congratulate all the organizers, authors ,co authors of the papers ,reviewers of this prestigious International Conference at WCEM Nagpur with technical indexing by IFERP and wish them all success.

ICAESM-21

International Conference on Advances in Engineering, Science and Management

Keynote Speakers

PROF. DR. ADITYA GHOSE

Professor of Computer Science and Director at Decision Systems Lab,
University of Wollongong
Greater Sydney Area, Australia

DR. M V REDDY

Institute of Research Hydro-Québec
Centre of Excellence in Transportation
Electrification and Energy

DR. ANDRÉS J. ARENAS FALÓTICO

Senior Lecturer and MBA Director
Universidad Antonio de Nebrija
Madrid

VINOD KUMAR

Sr. Site Leader-AWS Support at Amazon Web Services (AWS)
Hyderabad, Telangana, India

PROF. DR.VASUDEV MALHOTRA

Mechanical Engineering Department
J.C Bose University of Science and Technology
Faridabad

ICAESM-2021

International Conference on Advances in Engineering, Science and Management

Nagpur, India, 25th - 26th March, 2021

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ICAESM-2021

International Conference on Advances in Engineering, Science and Management (Virtual Conference)

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ABSTRACTS

ICAESM-2021

Organized by:

Wainganga College of Engineering & Management (WCEM), Nagpur

and

Institute For Engineering Research and Publication (IFERP)

Improving Efficiency by Using Synchronised Parallel Data Transmission over WSN

Rahul Bhandekar, Asst.Prof Dept of Computer Science & Engg WCEM Nagpur
Monika Ingole, Asst.Prof Dept of Computer Science & Engg WCEM Nagpur
Anirudh Bhagwat, Asst.Prof Dept of Computer Science & Engg WCEM Nagpur
DR.Tryambak Hiwarkar, H.O.D Dept of Computer Science & Engg WCEM Nagpur

Abstract:--

As the data transmission speed and the efficiency over the wireless network depend on the network or transfer device bandwidth. After physical implementation of wireless network which is difficult to dynamically control transfer in order to get high or low data transfer rate. Dedicating the fixed network for such a dynamic requirement network is not feasible. Many researchers are trying to enhance the wireless network speed by joining the transfer speed of multiple lines which will result in to asynchronous data transfer and data leakage. Hence the proposed system is to design and implements a dynamically controllable wireless network using the multiple radio frequency wireless devices. Here the proposed system will use multiple wireless devices and transfer data over multiple line depending upon the user configuration and synchronize the data over the receiving end. It will let the user control the wireless data transmission speed as per the requirement.

Customer Perceived Ethicality in the Indian Service Sector: Transcripts from the Qualitative Research

A N Ravichandran, Doctoral Student, Department of Business Administration, Aligarh Muslim University, India
Bilal M Khan, Professor, Department of Business Administration, Aligarh Muslim University, India.
Shanthi Venkatesh, Professor of Marketing, Loyola Institute of Business Administration, Chennai, India.

Abstract:--

Customer Perceived Ethicality (CPE) refers to the perceived ethicality of businesses by customers, and is one of the evolving subjects in the domain of Ethicality. This research paper uses qualitative research to investigate how customers form perceptions of un/ethical behaviour of various service firms/brands in India and is the first of its kind in defining CPE in conceptual terms in the Service sector. One to one interviews, recording, transcribing, classifying, and interpreting, constitute the methodology.

Reference is made to an earlier European study (Brunk, K.H, 2010). However, fresh insights unfold, and the framework in the service sector in India is unique, with substantially different domain items. Findings revealed that the perceptions of respondents on the topic were not homogeneous, however it was found that trustworthiness, transparency, honesty, reliability of service were used repeatedly by the respondents as important aspects of CPE. The study can be further used to advance research in India and in business decision making.

Impact of Electric Vehicles on Indian Distribution System

Ankita Khandait, Assistant Professor, Department of Electrical Engineering Waingangā College of Engineering and Management Nagpur, India
Yuvraj Chavhan, Assistant Professor, Department of Electrical Engineering Wainganga College of Engineering and Management Nagpur, India
Krutika Gaikwad, Assistant Professor, Department of Electrical Engineering Wainganga College of Engineering and Management Nagpur, India
Bramhadeo Wadibhasme, Assistant Professor, Department of Electrical Engineering Wainganga College of Engineering and Management, Nagpur, India

Abstract:--

Vehicles driven by fossil fuel drastically increases green house gases and air pollution and uncontrolled air pollution is going to deplete ozone layer. For this all governments all over the world is trying to make publicity and promoting electric vehicles to low down percentage of carbon dioxide , carbon monoxide like poisonous gases emission in environment. In this well thought mathematical calculations and modelling and simulations of e-vehicles. The disadvantages associated like more losses, more voltage fluctions , excessive overloading and higher cost. So a reference model is made to design a complete electric vehicle.

Keywords –

Electric vehicles, MATLAB/Simulink, Mathematical modelling, Load profile

Data Encryption Algorithm

Richa Kunal Sharma, Research Scholar, Career Point University, Kota, Computer Science

Abstract:--

Security in today's world is one of the important challenges that people are facing. For achieving faster communication most of confidential data is circulated through network as electronic data. In order to secure the confidential data encryption is done. Encryption is a mechanism that protects valuable information from unwanted people accessing or changing it. Cryptography is the science of using the mathematics to encrypt and decrypt data. In this paper a survey of some important encryption algorithm is provided and comparative study all the techniques with respect to speed, complexity and time. These encryption algorithms are studied and analysed well to promote the performance of encryption methods. This paper focuses mainly on the different kinds of encryption algorithms that are existing, and comparative study of all with respect to speed, complexity and time.

Index Terms—

Cryptography, Encryption, DES, AES, T-DES, RC5, IDEA, RSA, ELLIPTIC, DSA, TWOFISH, EEE.

Optimization of Operational Method to improve sustainable Energy Efficiency of Auxiliaries in a CFBC coal fired Boiler

Manish Radheshyam Moroliya, Ph.D. Scholar, Department of Mechanical Engineering, Kalinga University
Dr. Vinay Chandra Jha, Professor, Department of Mechanical Engineering, Kalinga University Raipur, C.G, India.

Abstract:--
The research paper provides details of the sultry dihydrogen monoxide heating system for power consumption such as aliment pump, victual pump motor, control valves etc; withal, details cognate to the test of the subsisting system power utilizing the 3-element mode method to control the drum level. Includes details about the sundry energy test equipment used during the potency test to quantify the sundry parameters such as flow, head, power haste, temperature and vibration. This study was conducted with the avail of 2 boiler and turbine engineers and 3 operators where there is an inch switch. During the study of the parameter sundry parameters were accumulated and designations were accumulated and the calculation was predicated on brake vigor and pressure disunion. In order to calculate it is consequential that one situation is sometimes engendered under the circumstances of each task. In cases of full volume, the drum pressure is customarily kg/cm2 above the maximum pressure. This denotes that when the total smoke load maximum pressure is ninety kg/cm2, then the corresponding drum pressure will be 100 kg/cm2. Ergo, while competitive calculations always engender the assurance that the pressure to aliment the victual in an economic rest area or aliment supply center is much more preponderant than the high pressure of the boiler drum suppleness for harmless operation.

Index Title –
Boiler Feed pump, Energy efficiency, Auto Scoop, Boiler auxiliary, Differential pressure, Drum level control

Study and Implementation of Routing Protocols in Wireless Sensor Network for IoT Applications

Deepali S.Anarase, JJTU,Rajasthan, A Research Scholar, Pune, Maharashtra-411028, Sr. Lecturer, JSPM
Prof. Dr.S. K.Yadav, Research Director, JJTU, Jhunjhunu, Rajasthan – 333001, JJTU, Rajasthan PhD Supervisor
Prof. Dr.D.C.Mehetre, HOD Computer Dept., KJCOEMR, Pune, Maharashtra-411028, JJTU, Rajasthan PhD Co-Supervisor

Abstract:--
Internet of Thing (IoT) connects physical artifacts to form a network. Maximizing network existence and maximizing use of the network is a key priority. Study is performed on parameters such as network existence with an Internet of Thing (IoT) viewpoint and routing protocol efficiency measurements utilizing parameters such as network resilience, network life, reliability, throughput, etc. We are focusing on an algorithm to improve IoT Low Energy Adaptive Clustering Hierarchy (LEACH) routing. The primary objective of our paper is to carry out simulation studies on routing protocols, in particular Low Energy Adaptive Clustering Hierarchy (LEACH)[6], Cycle-Based Data Aggregation Scheme (CBDAS)[6], Grid Based Hybrid Network Deployment (GHND), Improved Grid Based Hybrid Network Deployment (IGHND) for an Internet of Thing (IoT) and to use the MATLAB simulator for Low Energy Adaptive Clustering Hierarchy (LEACH) for Internet of Thing (IoT) output evolution.

Keywords:
Internet of Thing (IoT); Base Station(BS); Wireless Sensor Network (WSN); Cluster Head (CH)

Online Invoicing based on QR Code Recognition

Mohideen Rabiyathul Rabina.U, Francis Xavier Engineering College, Vannarpettai ,Tirunelveli, Tamilnadu ,India.
Vishnu Durga.S, Francis Xavier Engineering College, Vannarpettai ,Tirunelveli, Tamilnadu ,India.

Abstract:--
The main aim of this project is to develop QR Code Billing System in Super Markets for reducing the time taking for billing the products. The customer can be able to bill their respective product on their own and the corresponding details for billing are added into admin side. So there is no need for employees to monitor the barcode. Instead of barcodes the QR code have code in this scanning application and the details have stored into centralized database. It makes customer to pay easily products without the necessity of standing in queue.The QR code systems became popular outside the automotive industry due to its fast readability and greater storage capacity compared to standard UPC barcodes. Applications include product tracking, item identification, time tracking, document management, and general marketing. For touch and feel satisfaction, choice of items customers wanted to go for direct shopping comparatively. Even in direct shopping, customers feel hard to buy large number of products as it is difficult to carry the items throughout the shopping.In order to use QR codes, you need to have a smart phone capable of running decoding software. These phones can download and install applications, can access the internet, and have cameras. So QR code verifies products by capturing it through the smart phone then decodes and sends it to the server for authentication.

Index Terms—
Smartshopping, Smarttrolly, Quick Response(QR)

Design & Analysis of Stress on Drill Bit

Swapnil Choudhary, Asst. Professor Mechanical Engineering , Wainganga College of Engineering and Management
Chaitanya V. Kakde, PG Scholar CAD-CAM, Wainganga college of Engineering and Management
Dr .Bharat Chede, Professor Mechanical Engineering , Wainganga College of Engineering and Management
Nitin Sawarkar, Asst. Professor Mechanical Engineering , Wainganga College of Engineering and Management

Abstract:--

The manufacturing sector of India mainly depends on its productivity and quality. In many manufacturing activities, drilling is an ordinary operation that forms the main machining cost. This paper reviews development in drill bit with available geometric properties, materials for a drill bit, and coatings. For the lowest machining cost and highest profit rate, it's a difficult task to select the best tool with its cutting parameters.

With a slight improvement in drill bit geometric properties, we can minimize stress and improve the tool's quality and life. This paper will compare the stress generated over drills by making certain changes in drill geometric properties such as point angle. Drill with lower stress shows longer tool life. Micro drill with point angle 1160 shows less stress distribution. Micro drills with lower stress will have longer tool life. Two different materials as Alpha titanium alloy and Beta titanium alloy used for analysis. We got the different results with parameters, from that the beta titanium alloy is best, which comes in the nearby comparison with HSS. Comparison between alpha and beta titanium alloy is done with HSS based on their equivalent stress, strain, and deformation.

Keywords –

Drill Bit, Analysis, Stress

Failure data Analysis to Check Reliability of System of 1000 Electronic Components

Suhas Wankhede, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India
Sharayu Wasu, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India
Ashish Khelkar, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India
Nitin Sawarkar, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India

Abstract:--

Reliability is the ability of a device to place a limit on overall performance of a device. It is the probability of device to give precise performance for a sequence of operating conditions which are specified .If a system does not perform and have consistent error from one. A system is said to have failed if it is not precise and does not perform satisfactorily. The life test result of a system gives the pattern of failure i.e. testing of a group of test models till their occur a failure and observing the characteristics of failure as a function of time. In the given system a field data on 1000 bulbs were recorded to formulate the result for reliability, progressive failure, failure density and probability of failure. The 1000 bulbs for testing were kept on and the results were noted for individual failure and group failure. The probability of failure and reliability is noted for each hour and a bathtub curve is plotted for failure density verses time and failure ratio verses time.

A Review Paper on Investigation of Seismic Behaviour of Shear Wall in Multi-Storey Building

Kushalkumar Yadav, Asst. Professor in Civil Engineering Department (WCEM, Nagpur)
Dipak Nakhate, Asst. Professor in Civil Engineering Department (WCEM, Nagpur)
Kajal Pachdhare, Asst. Professor in Civil Engineering Department (WCEM, Nagpur)
Mohit Chachere, Asst. Professor in Civil Engineering Department (WCEM, Nagpur)

Abstract:--

Shear wall systems are one of the most commonly used lateral load resisting systems in Multi-Storey Building buildings. In this paper, the different papers are studied which were published in different Journals. The main focus on the studies of seismic behavior of shear wall in multi-storey building and it will be discussed in detail. The analysis which are done using STAAD Pro E-Tabs and SAP software are compared with the Calculated values. The calculation which are done by using the IS Code IS 1893:2002, criteria for earthquake resistant design of structures part 1 general provisions and buildings. The results of Shear forces, bending moment and storey drift will be computed in both the cases and location of shear wall will be established based upon the computational results.

Keywords:

Storey drift, Lateral Displacement, STAAD Pro, SAP software.

Disease Identification In Crops Using Deep Learning Models

Adya Trisal, Student, BE IV Year Computer Engineering, Institute of Engineering and Technology, Devi Ahilya University, Indore, Madhya Pradesh, India
Prabhleen Kaur Saini, Student, BE III Year Computer Engineering, Institute of Engineering and Technology, Devi Ahilya University, Indore, Madhya Pradesh, India

Abstract:--

Food is one of the most fundamental necessity, inevitable for human survival. Loss of crops poses a major threat to a society that is witnessing an ever-increasing demand of food supply due to exponential increase in population. There are around numerous species of insects that consume and damage crops. These pests attribute towards destroying one fifth of the yearly worldwide crop yield. Post hoc green revolution, the losses due to pest infestation dropped subsequently, but still the losses were a considerable amount. Hence, amplifying crop yield as well as impeding loss of crops has been one of the major under taking in the 21st century. One of the root cause of crop loss is due to fungal, bacterial or viral diseases. In this research paper we present a digitalized approach to detect plant diseases by utilizing image detection, computer vision and deep learning models like Convolutional neural networks, Inception model, VGG16 model. We have also evaluated the performance of these models based on metrics such as f1 score, accuracy, precision and recall

Index Terms-

Convolutional neural networks, Disease identification, Inception model, VGG16 model

Security for Multi Cloud Using Server less Registering Approach

Shravani Jasthi, Wainganga College Of Engineering and Management,Nagpur
Amita Suke, Wainganga College Of Engineering and Management,Nagpur
Rupali Saha, Wainganga College Of Engineering and Management,Nagpur
Tryambak Hiwarkar, Wainganga College Of Engineering and Management,Nagpur

Abstract:--

These days, in any application development, security for specific area has become crucial job in the service access environment. Since clients needs to utilize the unique services and resources in distributed computing environment. Here the security administrations and cloud portal frameworks have been highly advanced based on the client necessities. However cloud offers a lot of resources through the global service vendors and Multicloud technologies are rapidly in use, but still the cloud requires security enhancement. Applications become complex and have attacks when deployed on multiclouds .So it is very important factor to protect the data and resources from the hackers. In multiple cloud environments it is possible to control all the applications, user resources, secret information and other confidential user process level with the help of server less approach. The server less computing approach is a sort of Distributed computing execution model through which Cloud Service provider will allocate the resource to the client in a dynamic manner .This paper represents what is Multi cloud, advantages of Multicloud, Why Security issue with Multi cloud, How server less is different from monolith services and Security Approaches to multi cloud with server less computing.

Index Terms

cloud services, multicloud, server less computing.

A Survey on "Machine translation Approaches for Indian Languages"

Pooja P. Walke, Research scholar, CSE, Oriental University, Indore, India. Assistant Professor, St Vincent Pallotti College of Engineering & Technology, Nagpur, India.
Dr Farha Haneef, Associate Professor, Department of CSE, Oriental Institute of Technology & Research, Bhopal, India.

Abstract:--

Translation has always helped India to knit Indians together with respect to its rich culture and literature. Ideas and concepts like 'Indian ancient literature','Indian rich culture','Indian philosophy' and 'Indian knowledgeable systems' would have been impossible in the absence of translations with their natural integrationist mission.Machine Translation assist to translate Information presented in one language to other language. Information can be present in form of text, speech and image translating this information helps for sharing of information and ultimately information gain.Translation process is an extremely complex & challenging process. It requires an in-depth knowledge about grammar of both the languages i.e. Source language and Target language to frame the rules for target language generation. Marathi is a regional Indian language and consists of a lot of literature that could be useful if projected in the universal English language. As manual translation is a tedious task, we propose a literature survey about machine translation systems that translates Indian Languages into English Language using various Machine translation approaches like RBMT, SMT, NMT, Hybrid translation.

Key words:

Machine Translation System (MTS), Marathi Language Translation, Rule-Based Machine Translation (RBMT), Statistical Machine Translation (SMT), Neural Network Machine Translation (NMT), Hybrid Machine Translation.

Study and Analysis of Dual Mode Operation of Single DC Motor (Series and Separately Excitation Modes)

Rahat Ullah Khan, Department of Electrical & Electronics Engineering, KIET Group of Institutions Ghaziabad, India.
Dr Rubeena Saleem, Assistant Professor, Deanship of Common first year, Department of Physics Jamia Umm Al Qura, Makkah Al Mukarramah, Kingdom of Saudi Arabia

Abstract:--

This paper presents a novel idea of a method to run DC series motor and then into DC separately excited mode and vice versa during operation. The purpose of this paper is to give an analysis of a real-time study performed experimentally for both series and separately excited operation of DC motor. The DC motor initially started in series mode giving high torque at a constant load in the form of an inertia wheel as starting load. The motor is then switched to separately excited DC mode with the help of switches after attaining the required number of rpm or speed. High speed with sufficient torque and good controllability is observed in separately excited DC motor mode. Eventually, this system has been proven with experimental results and proposed for numerous applications especially where high starting torque and less speed is required and after that, high speed is required. Analysing results with the help of MATLAB previously, a hardware-based real-time operating system has been provided. This setup can be proposed for various applications such as battery operated DC machines especially Electric Vehicles and off-road Electric Vehicles and Solar powered applications as well.

Keywords

Dual Mode Operated DC Machines; Series and Separately Excited Single DC Machine; Solar Energy Based Electric Vehicles; Energy Efficient DC Machines for Electric Vehicles.

Multi-Platform Multi-Sensor Data Fusion Algorithms

Mr. Aniket Siddhaling Kothawale, Research Scholar, Shri JJT University, Rajasthan, 333001
Dr. Nitika Choudhary, Professor, Physics Department, Shri JJT University, Rajasthan 333001
Dr. Jagdish D. Deshpande, HOD & Associate Professor, Electronics Department, Tuljaram Chaturchand College Baramati 413102

Abstract:--

There has been a substantial growth in multidiscipline research on multi-sensor data fusion technology, motivated by its functionality and diverse areas of application. Thus, an empirical study of recent developments in the field of data fusion would seem to be relevant. This paper proposes an exhaustive analysis of the algorithms of data fusion, discussing its conceptualizations, advantages, challenges and current methodologies. In this paper we are focus on different algorithms of Multisensor Data Fusion, method, proposed work by using ANN algorithms.

Keywords:

Multi-Sensor; Data Fusion; Remote Sensing, ANN Algorithms, WSN

Load Balancing across Virtual Machine using Analytics

Archana Naik, Department of Computer Science & Engineering, Nitte Meenakshi Institute of Technology, Bangalore
Kavitha Sooda, Department of Computer Science & Engineering, B. M. S. College of Engineering, Bangalore

Abstract:--

With the demanding increase in the cloud resources, a finer load balancer is required to allocate the resources. The load balancer across Virtual Machine can be utilized for better performance, failure recovery, load balancing in the cloud environment. A design for virtual machine assignment for an application request is proposed here. When there is increase in load beyond the threshold in any of the virtual machines, the decision to be made on selecting the virtual machine for processing the new application request. This work provides an architectural framework for analyzing the status of the virtual machine and to assign the virtual machine to the new application requests.

Keywords:
Load balancing, Virtual Machine Migration, Virtual Machine Monitor

Religious Ethnic Festivals: The Case of Nuakhai Festival

Abhilash Satpathy, P.H.D Scholar, School of Hotel Management, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha, India
Dr. Anshuman Samal, School of Hotel Management, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha, India
Dr. Patitapabana Mohanty, School of Hotel Management, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha, India

Abstract:--

A Festival is celebrated by a community in lieu of their community, cultural and religious beliefs that builds a bond between all them. More of religion and folklore based, the ethnic festivals are more of agricultural in nature that we observe during the harvest time. In western cultures, Religious commemoration such as Halloween and Easter are celebrated for thanksgiving for the good amount of harvests in the season to the nature and almighty. Sharing same belief, in the western parts of Odisha, and in some parts of the Jharkhand state, a unique agriculture based festival known as the Nuakhai is observed to welcome and newly grown rice crop of the season. The belief underlying the celebration of this festival is to respect the nature as mother so that in she will bless us with bountiful crops for all time to come. Along with the divinity towards the Mother Nature, this festival also shows respect for elders in the family, village deities, promotes unity and friendship in the society. This paper examines the criticality of the festival, its origin, journey from past to present, rituals as well as the potential to attract the tourists towards the region.

Keywords—

Culture, Religious Ethnicity, family and traditions, history and origin

Optimization of Strategies for Modelling of Energy Absorbing Structures in Vehicles

Prof.Aditi Subhedar, Department of Mechanical Engineering, Wainganga College of Engineering and Management, Dongargaon, Nagpur
Prof.Bhavesh Bohra, Department of Mechanical Engineering, Wainganga College of Engineering and Management, Dongargaon, Nagpur
Dr. Bharat Chede, Department of Mechanical Engineering, Wainganga College of Engineering and Management, Dongargaon, Nagpur
Prof.Ashish Khelkar, Department of Mechanical Engineering, Wainganga College of Engineering and Management, Dongargaon, Nagpur

Abstract:--

Crash performance is imperative to ensure safety of vehicle. A major challenge in the design and optimization of vehicle crash systems is the high computing costs needed for crash analysis. It is imperative that energy-absorbing structural principles can be introduced and optimized at the early stages of vehicle design in order to improve crash efficiency by creative and optimized vehicle architecture. Through developing rapid modelling strategies, this potential can be maximized. In this paper modelling approaches are investigated using Finite Element Method for one application. Description for energy absorption structures are studied and implemented into new user defined model description for an explicit Finite Element Crash Solver. The simplified energy absorbing structure is verified using Finite Element Models.

Key-words:

Energy Absorption Structures, Finite Element Models, Crash Performance, Optimization, Rapid Modelling

Automatic Temperature Control of Flute in Paper Corrugated Box Manufacturing Machine

Dr. Bharat Chede, Professor Mechanical Engineering Wainganga college of Engineering and Management
Ayu Kalidas Ramteke, Research Scholar Wainganga college of Engineering and Management
Dr.D.R. Tutakane, Professor Electrical Engineering Wainganga college of Engineering and Management
Prof. SwapnilChoudhary, Asst Professor Mechanical Engineering Wainganga college of Engineering and Management

Abstract:--

Paper corrugate boxes are widely and extensively used for packing of industrial and domestic item. There are various kinds, depending on the item to be package, size, thickness, and strengths. Cardboard pass through flutes at high temperature at 180-250 degree Celsius. Due to continue running of roller, roller temperature increase above 270 degree Celsius and leads to halt production for some time to cool down rollers. Here the study of feasible option to overcome overheating problem is suggested.

Keywords

Paper corrugate box, roller temperature, production halts.

Linear Three-step Power factor monitor with Proportional DC voltage output

D.R.Tutakne, Department of Electrical Engineering, Wainganga College of and EnginneringManagement Dongargaon Nagpur, India
Ajay Tinguria, Department of Electronics Engineering, Wainganga College of and EnginneringManagement Dongargaon
Bharat Chede, Department of Mechanical Engineering, Wainganga College of and EnginneringManagement Dongargaon Nagpur, India
N.V.Deshpande, Department ofCivil Engineering, Wainganga College of and Enginnering Management Dongargaon Nagpur,India

Abstract:--

A simple linear direct power factor monitor cum DC voltage converter for wide range of input power factor for linear loads has been described. In this scheme, the input power factor can be directly estimated just in three steps. The first step is to measure the load current through current transformer at the instant of voltage peak of sine wave supply voltage or at ninety degrees from positive zero crossing of the supply voltage wave, the second step is to find the current peak value of load current itself and the third step is to take the ratio of these two values which is directly equal to the input power factor. The experimental results along with theory have been explained.

A Novel and Reliable Renewable Energy Storage System

Pranidhi Kulshrestha, Amity University, Noida UP, India
Richa Mishra, Amity University, Noida UP, India
Gaurav Yadav, Amity University, Noida UP, India

Abstract:--

As we all are moving towards the developments and achievements in the science and technology , the importance to energy and its storage is arising in every field . Energy storage plays a very important part in the management of everything as it allows us to create a more flexible and reliable grid system. The energy storage is a serious concern as this allows a lot of other works to take place for the benefit of our own system. Photovoltaic cells produce electric energy in a short interval during a period of low demand and show high levels of intermittency. One of the well-known solutions is to store that energy and then convert it into a more stable form, to transform again into electricity during high demand peroids, in which the energy has a higher value. This process provides economic viability for most energy-storage projects, even for the least efficient and most common, such as batteries

Energy is drawn by various resources one such is the renewable resources like wind , solar , hydro et cetera and this energy needs to be stored for future requirements which is another difficult task to accomplish therefore we require a stable, flexible and a long lasting system.

The world is creating lots and lots of electricity from intermittent renewable energy sources that also requires top be stored as the demands may be low and then they may release these s tored energies. The development of the novel storage technology offers some of the best features of the lithium batteries and pumped storage.

Gravity Storage is a concept with which unprecedentedly large quantities of power can be stored for a long time of 6-14 hours, and can be made available again. The capacity of energy storage can be chosen between 1 and 10 GWh, comparable to large Pumped Hydro Storage. A gravity battery is an energy storage device that stores gravitational potential energy.

Keywords:

Renewable Energy, Energy storage , Gravitational energy, Energy consumption

Implementation of Three Phase Earth Leakage Circuit Breaker

Ankita Mankar, Mtech (PEPS)
D.R.Tutkane, Phd (Electrical Engineering)
Snehal Ingewar, Mtech (PEPS)

Abstract:--

In any electrical system, protection is the most important requirement to secure both human lives and application from the damage. The THREE PHASE EARTH LEAKAGE CIRCUIT BREAKER (ELCB) is a design which could be implemented in three phase electrical environment to provide protection to user as well as equipments against any earth leakage fault. In three phase circuit all current carrying conductors must be sensed. An Earth-leakage circuit breaker (ELCB) is a safety device used in electrical installations with high Earth impedance to prevent shock. It detects small stray voltages on the metal enclosures of electrical equipment, and interrupts the circuit if a dangerous voltage is detected. Once widely used, more recent installations instead use residual current circuit breakers which instead detect leakage current directly.

Keyword:

Earth leakage circuit breaker, Residual circuit breaker.

Significance of Adult Literacy Programmes for the Nyishi Women of KRA Daadi District of Arunachal Pradesh

John Pudussery, Research Scholar, Department of Education, Arunachal University of Studies, Namsai, Arunachal Pradesh, India
Dr. Philomina M.J, Assistant Professor, Department of Education, Arunachal University of Studies, Namsai, Arunachal Pradesh, India

Abstract:--

Arunachal Pradesh, a very little-known state by the rest of the country, lies in the northeast part of India. Land of the abundance of freshwater, pure air, mist, and virgin forests, Arunachal Pradesh will capture the attention of anyone. The land is home to several tribes, sub-tribes, and clans with their typical dialects, traditions, culinary, dress code, and mystery. The Nyishi tribe in the western part of the state is numerically the largest tribe. Due to their remoteness and lack of proper roads progress was slow in this region. However, in the recent past quick developments are noticed in the area. Yet much is to be desired. This article focuses on a study conducted among 400 Nyishi tribal married women from the Kra Daadi district of Arunachal Pradesh. The researcher studied several issues related to the school-dropouts among them like - the reason why these women never went to school or when they dropped out of school, reasons for dropping out of school, and if they would like to study again if given an opportunity. The findings are aimed at further studies on the matter and direct the attention of the department of education in the state to take up remedial measures especially in the field of Adult Literacy Program, especially among women.

Keywords:

Nyishi women, Adult Literacy, Dropout, Kra Daadi District, Arunachal Pradesh

An Economic Analysis of Wastewater Subproject in Chittorgarh

Dr. Dipti Ranjan Mohapatra, Associate Professor, Amity College of Commerce and Finance, Amity University Uttar Pradesh, Noida

Abstract:--

RUIDP programme include waste management, water supply & water management, road & urban transport, social sectors and creation of infrastructure for cultural heritage etc. in major cities of Rajasthan. RUIDP was joint initiative of Government of Rajasthan, Government of India and Asian Development Bank. Phase II of RUIDP was taken up in fifteen cities in Rajasthan. Chittorgarh was a selected city for RUIDP. Out of ₹911.12 (approximately 12.47 million US$), total cost of sewerage project was ₹275.32 million (approximately 3.77 million US$). Climate change is related with water and sanitation services. Climate resilience measures such as water safety plans, as well as improved accounting and management of water resources reduces climate risks. The likely benefits from climate change adaptations outweigh the costs of investment. In this paper economic feasibility of waste water sub-projects in Chittorgarh has been analyzed in cost – benefit format. Waste water sub-projects also found to be beneficial.

Index Terms—

waste water, sustainable development

Scope of Digital Manufacturing in India after Covid-19

Dr Bharat Chede, Professor Mechanical Engineering. Wainganga College of Engineering and Management, Nagpur
Nitin Sawarkar, Assistance Professor Mechanical Engineering. Wainganga College of Engineering and Management, Nagpur
Swapnil Choudhary, Assistance Professor Mechanical Engineering. Wainganga College of Engineering and Management, Nagpur
Ajay Tinguria, Assistance Professor Elctronics Engineering. Wainganga College of Engineering and Management, Nagpur

Abstract:--

Digital Manufacturing has got wide Scope after COVID-19pandemic Digital Manufacturing is a wider term .in new age of manufacturing, where material and digital innovations makes the industry to achieve the desired design and quantity in shorter time period compared to conventional method. It comprise of ergonomics, human factor analysis, visualization, manufacturing simulation, product design to process and process design. After pandemic there is increase in demand of many commodity for which high rate of production is required to overcome this digital manufacturing can play vital role in overcoming this.

Keywords:--

Digital Manufacturing, Virtual reality, Smart factory COVID-19

Investigation of Pipe Inspection Robot by Using Commercial Package

Nitin Sawarkar, Asst Professor, Wainganga College of Engineering and Management, Nagpur, India.
Lokesh D. Mankar, Research scholar,Wainganga College of Engineering and Management, Nagpur, India.
Dr .Bharat Chede, Professor, Department of Commerce, Kristu Jayanti College
Swapnil Choudhary, Professor, Wainganga College of Engineering and Management, Nagpur, India

Abstract:--

There will be a great commercial and industrial advantage to a robot device capable of operating in active pipelines. In order to identify defects due to corrosion and wear while the pipe is carrying fluids, pipe inspection is important. Because pipelines are usually buried underground, they are in contact with the soil and susceptible to corrosion, where the wall of the steel pipe oxidizes and wall thickness decreases effectively.The pipes and drains of many plants have recently become old and many robots have been built in the past to inspect these pipes. In several fields of manufacturing, inspection robots are used. Monitoring the inside of the pipes and channels, detecting and solving problems from the interior of pipes or channels is one application of the pipe inspection method.

Index Terms

Industrial benefits,locatepipe defects, monitoring insides of the pipe, economical cost.

Classification Model for Phishing E-Mails with a Datamining Approach

Sharmila S P, Assistant Professor, Dept. of Information Science and Engineering Siddaganga Institute of Technology, Tumakuru
Balaji Rao Katika, Senior Research Scientist V-Labs Private Limited, Manipal Technologies, Bangalore

Abstract:--

In the field of computer security, phishing attacks are one of the trending cyber-attacks. Phishing is an online criminal act that occurs when a malicious webpage impersonates as legitimate webpage so as to acquire sensitive information such as username, password, bank details by masquerading as a trustworthy entity. Attackers create a replica of an existing web page to fool users (e.g. e-mails, instant messages etc.). Phishing attack continues to pose a serious risk for web users and annoying threat within the field of electronic commerce. The increasing number of phishing websites has become a great challenge in e-business in general and in electronic banking also. The attacker makes a fake webpage by copying or making a little change in the legitimate page, so that an internet user will not able to differentiate between phishing and legitimate webpages. So, it is important to develop techniques which help in reducing these attacks. The theme of our project is to reduce the attacks by identifying them in the first place and avoid people to fall into such kind of traps

Term Weighting Using Coherent Clustering In Topic Modelling

Manisha Amnerkar, Assistant Professor, Department of Computer Science & Engineering Wainganga Collage of Engineering & Management,Nagpur, India.
Pranjali Manmode, Assistant Professor, Department of Computer Science & Engineering Wainganga Collage of Engineering & Management,Nagpur, India.
Tara Shende, Assistant Professor, Department of Computer Science & Engineering Wainganga Collage of Engineering & Management, Nagpur, India.

Abstract:--

Topic models usually manufacture uncountable topics that area unit stuffed with reedy words. the explanation is that words in topic modelling have same weights. a lot of frequency words dominate the highest topic word lists, however most of them area unit unimportant words, e.g., domain-specific stopwords. to deal with this issue, during this paper we have a tendency to aim to analyze a way to weight words, and so develop a simple however effective term weight theme, particularly entropy weight (EW). The projected electronic warfare theme is predicated on conditional entropy measured by word co-occurrences. Compared with existing term weight schemes, the highlight of electronic warfare is that it will mechanically reward informative words. For a lot of strong word weight, we have a tendency to any recommend a integrated style of electronic warfare (CEW) with 2 existing weight schemes. Basically, our CEW assigns nonmeaningful words lower weights and informative words higher weights, resulting in a lot of coherent topics throughout topic modelling logical thinking. we have a tendency to apply CEW to DMM and LDA, and valuate it by topic quality, document agglomeration and classification tasks on eight globe knowledge sets. searching results show that weight words will effectively improve the subject modelling performance over each short texts and traditional long texts. a lot of significantly, the projected CEW considerably outperforms the present term weight schemes, since it any considers that words area unit informative.

Keywords:

Topic modeling, Term weighting, Informative word, Conditional entropy.

Field dependent study on formation of ferroelectric domain in $KNbO_3$ single crystal

Vivek B. Korde, Wainganaga College of Engineering and Management, Nagpur
Prafulla Puri, Wainganaga College of Engineering and Management, Nagpur
Naresh M. Patil, Laxminarayan Institute of Technology, RTM Nagpur, University, Nagpur-440033, India.

Abstract:--

The study of ferroelectric domains is essential for understanding the orientation of electric dipoles. This orientation of electric dipole shows the defect and impurities formation in a ferroelectric single crystal. Domain study is important for studying formations of defects and movement of dipoles in Al-doped $KNbO_3$ single crystal. The Al-doped $KNbO_3$ ferroelectric Single-crystal prepared using flux methods; then it chemically etched using methyl alcohol and nitric acid as an etchant. The electric field of 50 V/cm, 60 V/cm, and 70 V/cm was applied to the doped crystal. The variations of domain structure after the applying electric field are observed using the Trinocular microscopy method.

Index Terms

Domain Impurities: $KNbO_3$: Electric Field.

Breast Cancer Detection Using Machine Learning Classification Algorithm

Khushbu Verma, Department of Computer Science and Engineering, H.N.B.G. University, Srinagar Garhwal, Uttrakhand, India.
Narendra Kumar Rawal, Department of Computer Science and Engineering, H.N.B.G. University, Srinagar Garhwal, Uttrakhand, India.

Abstract:--

Data mining is a technique to extract same meaningful knowledge from large amount of data which stored `in various heterogeneous databases. Nowadays in healthcare sector data mining is coming out important field for providing accurate prediction and diagnosis of disease and deeper study of medical data. Machine Learning is a subset of AI, machine learning algorithm is a set of instruction that train on a dataset to make prediction. Breast Cancer is a disease in which cells in the breast grow out of control. A tumor can be benign or malignant. The term "Breast cancer" refers to a malignant tumor that has developed from cells in the breast. Cancer occurs as a result, in the genes responsible for regulating the growth of cells and keeping them healthy.

Index Terms—

Machine Learning, Breast Cancer, J48 Algorithm, Data Mining.

Finite Element Analysis on GFRP Composite Piles

Asst. Prof. S. N. Bhadke, Wainganga College of Engineering and Management, Nagpur
Asst. Prof. D. K. Madavi, Wainganga College of Engineering and Management, Nagpur
Asst. Prof. G. Hingwe, Wainganga College of Engineering and Management, Nagpur

Abstract:--

Fibre-reinforced polymer (FRP) composite as a pile material can eliminate deterioration problems of conventional piling materials when exposed to harsh or marine aggressive environments. Researchers studies related to the use of FRP materials as pile are very limited. This paper presents the results of study related with the performance of glass fibre reinforced polymer pile foundation resting in marine clay. For this purpose, numerical model of FRP pile was developed in MIDAS GTS NX software to simulate the pile foundation. A define soil model represents marine bed and pile embedded within it is subjected to vertical loading. FRP pile materials investigated were glass fibre reinforced polymer (GFRP) and the results were compared to the conventional concrete pile. The results show that the ultimate load capacity of FRP pile is higher than that of conventional concrete pile.

Keywords-

MIDAS GTS NX , Fibre reinforced polymer (FRP), marine soil , ultimate load capacity.

Failure data Analysis to Check Reliability of System of 1000 Electronic Components

Suhas Wankhede, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India
Sharayu Wasu, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India
Ashish Khelkar, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India
Nitin Sawarkar, Assistant Professor at Wainganga College of Engineering, Dongargaon, Nagpur, India

Abstract:--

Reliability is the ability of a device to place a limit on overall performance of a device. It is the probability of device to give precise performance for a sequence of operating conditions which are specified .If a system does not perform and have consistent error from one. A system is said to have failed if it is not precise and does not perform satisfactorily. The life test result of a system gives the pattern of failure i.e. testing of a group of test models till their occur a failure and observing the characteristics of failure as a function of time. In the given system a field data on 1000 bulbs were recorded to formulate the result for reliability, progressive failure, failure density and probability of failure. The 1000 bulbs for testing were kept on and the results were noted for individual failure and group failure. The probability of failure and reliability is noted for each hour and a bathtub curve is plotted for failure density verses time and failure ratio verses time.

Input Parameters Control of Induction Motor Modelling Using PWM Inverter

Nainttara Wasnik, Professor Electrical Engineering, Yeshwantrao Chavan College of Engineering
Vipul Nandedkar, Professor Electrical Engineering, IIT Hydrabad
Dr. D. R. Tutakne, Professor Mechanical Engineering, Wainganga College of Engineering and Management
Dr Bharat Chede, Wainganga College of Engineering and Management

Abstract:--

It was in common practice to use dc motors for the speed control or varying the speed of induction motors. Today as the technology advances, Induction motors can be run as variable speed drives as a result of development in power electronic devices. For this, rather than controlling the output of induction motor or load, input parameters must be controlled. This results in utilization of inverter circuits.

Also, the various devices used in between the induction motor and the load produces many difficulties, such as unmatched torque or speed to the desired value. Therefore, to eliminate these devices and to have independent control over the parameters, input side of the induction motor must be controlled to produce desired torque or desired parameters at the output. This paper presents the control of de-coupled induction motor (Modelling of Induction Motor) from input side using PWM (Pulse width Modulation) inverter.

Accident and Alcohol Detection in Bluetooth enabled Smart Helmets for Motorbikes

Gaurav Khobragade, Department of Electronics Engineering Wainganga College Of Engineering, Nagpur, India
Rahul Nawkhare, Department of Electronics Engineering Wainganga College Of Engineering, Nagpur, India
Dr.Pratik hazare, Department of Electronics Engineering Wainganga College Of Engineering, Nagpur, India

Abstract:--

In present time, many cases of accident can be seen around us. Continuously road rules are violated. To address these issues, a Smart Helmet with a control system integrated into the helmet has been proposed. Smart Helmet for motor cyclist is a project undertaken the rate of road safety among motor cyclist. Idea of this work is to give information about the rider wearing the helmet or not, he met with an accident it gives and information about location where he met with an accident through GSM module to mobile numbers family members, so we have chosen GSM technology to give the information by sending SMS, Using GSM module which has SIM card slot to place the SIM and send SMS. Sending SMS alone Can't help the driver, if we send and an SMS saying that accident that occurred where the ambulance will come without knowing the location of the accident. So to trace out the location where exactly accident occur using GSM module. Then it sends the SMS which contains the latitude and longitude of a area to family relation mobile numbers. The breath analyzer senses the quantity of alcohol present within the breath of an individual wearing the helmet and reports if it`s beyond the legal limit. We use onboard sensors for this, including a flex sensor, an impact sensor, an accelerometer (ADXL355), and a breath analyzer (MQ3). The helmet can connect to any Smartphone via Bluetooth, to speak with the web API, using the web connection of the Smartphone. This will make sure the holistic safety of the rider at all timesThe craze for motorcycles in today's era, especially among the younger generation, is truly remarkable.

Keywords-

Internet of Things; Smart Helmet; Support Vector Machine; Accident detection; Alcohol detection

Communication Over the Power Transmission Line using PLC Modules

Jayshree Laxmanrao Alone, Electronics Department, Wainganga College of Engineering and management
Rahul Nawkhare, Electronics Department, Wainganga College of Engineering and management
Ashish Bandre, Electronics Department, Wainganga College of Engineering and management
Pratibha Motwani, Electronics Department, Wainganga College of Engineering and management

Abstract:--

In this paper, we give an overview of power line communication(PLC) technology. This paper presents an overview of the research, applications, standards, and importance of power line communication. Power line communication is an emerging home network technology that allows consumers to use their already existing wiring system to connect home appliances and to the Internet. Noise in power line communication and impulsive noise are presented in this paper. The PLC channel is discussed to such an extent[1]. We give an overview of the Power Line Communications system technology its importance, its standards, and an overview of the Home applies standards associated with it. This is done in two parts. In this part, we will concentrate on the PLC applications and the technical issues regarding them. We will also see the layers and methods that are needed to make it work before we use it[2]

Soil Nutrients Testing Using IR Photo Spectrometer

Shubham D. Hedau, Electronics and telecommunication department , Wainganga college of engineering and management
Rahul nawkhare, Electronics and telecommunication department , Wainganga college of engineering and management
Ajay tingurai, Electronics and telecommunication department , Wainganga college of engineering and management

Abstract:--

The feasibility of a Stand-Alone compact, modular sensing system (without chemical & Physical Testing) able to quantify the presence of nitrogen, phosphorus, and potassium (NPK) are very important nutrients in the agricultural soil to supply nutrient- containing fertilizer and water need. Direct IR 700 - 15000 nm Wavelength (spectroscopy combined for optical) was employed to design modular compact sensing systems able to record absorption spectra of nutrient solutions resulting from local producer samples. This N, P, and K spectral interference were studied by mixtures of commercial fertilizer solutions to simulate real-time conditions in Agricultural Farming productions. This project demonstrates that the use of bands for the quantification of nitrogen with logarithmic regression models does not produce analytical grade calibrations. Furthermore, multivariate regression models. Mathematically Partial Least Squares (PLS), which used to define for Specimen interference, perform very high to partial absorbance of nutrients. The high interference in wavelength of IR present in the spectra was proven to be solved by an adaptive self-learning mechanism known as an artificial intelligence algorithm that is able to find interference modes among a spectral database to produce consistent predictions of nutrients. In an Appropriate manner of modeling the existing interferences, Analyze by a grade quantification of N, P, K has providing predicted correct results. The results of this work open the possibility of real-time monitoring in Micro-Irrigation Systems.

Keywords :-

Soil Nutrients, IR spectrophotometer, Precision Agriculture, DSP Processing.

Automatic Number Plate Recognition System (ANPR)

Anjali S. Bahadure, Electronics and telecommunication department , Wainganga college of engineering and management
Rahul Nawkhare, Electronics and telecommunication department , Wainganga college of engineering and management
Ashish Bandre, Electronics and telecommunication department , Wainganga college of engineering and management

Abstract:--

Traffic control and vehicle owner identification has become major problem in every country. Sometimes it becomes difficult to identify vehicle owner who violates traffic rules and drives too fast. Therefore, it is not possible to catch and punish those kinds of people because the traffic personal might not be able to retrieve vehicle number from the moving vehicle because of the speed of the vehicle. Therefore, there isa need to develop Automatic Number Plate Recognition (ANPR) system as a one of the solutions to this problem. There are numerous ANPR systems available today. These systems are based on different methodologies but still it is really challenging task as some of the factors like high speed of vehicle, non-uniform vehicle number plate, language of vehicle number and different lighting conditions can affect a lot in the overall recognition rate. Most of the systems work under these limitations. In this paper, different approaches of ANPR are discussed by considering image size, success rate and processing time as parameters. Towards the end of this paper, an extension to ANPR is suggested.

Keywords:

Automatic Number Plate Recognition (ANPR), Artificial Neural Network (ANN), Character Segmentation Image Segmentation, Number Plate, Optical Character Recognition

Brain Controlled Mobile Robots Using Brain Wave Sensor

Shruti Yashwant Umate, Department of Electronics Engineering, Wainganga College Of Engineering and Management, Nagpur.
Dr.pratik Hazare, Department of Electronics Engineering, Wainganga College Of Engineering and Management, Nagpur.
Rahul nawkhare, Department of Electronics Engineering, Wainganga College Of Engineering and Management, Nagpur.

Abstract:--

In a brain controlled robot controller is based on Brain–computer interfaces (BCI). BCIs are systems that can bypass conventional channels of communication to provide direct communication and control between the human brain and physical devices by translating different patterns of brain activity into commands in real time. With these commands a mobile robot can be controlled. The intention of the project work is to develop a robot that can assist the disabled people in their daily life to do some work independent of others. Here, we analyze the brain wave signals. Human brain consists of millions of interconnected neurons. The pattern of interaction between these neurons are represented as thoughts and emotional states. According to the human thoughts, this pattern will be changing which in turn produce different electrical waves. A muscle contraction will also generate a unique electrical signal. All these electrical waves will be sensed by the brain wave sensor and it will convert the data into packets and transmit through Bluetooth medium. Level analyzer unit (LAU) will receive the brain wave raw data and it will extract and process the signal using MATLAB platform. Then the control commands will be transmitted to the robot module to process. With this entire system, we can move a robot according to the human thoughts and it can be turned by blink muscle contraction.

Keywords:

Braincomputerinterface, brainwavesensor, EEG, Bluetooth, Zigbee, matlab, brainwavevisualizer

ANALYSIS AND SIMULATION OF IPv4 and IPv6 PROTOCOL

Nitin Nandeshwar, Wainganga College of Engineering and Management Nagpur
Prof.Rahul N. Nawkhare, Wainganga College of Engineering and Management Nagpur
Prof.Ashish R.Bandre, Wainganga College of Engineering and Management Nagpur

Abstract:--

In this modern technology where growth of network is increasing rapidly. This paper covers the analysis of routing protocols it specifies how routers communicates with each other by spreading information also provides the infrastructural view of a network, where routing protocol are used to transmit packets over network. There are various types of routing protocols being widely used as follow RIP(Routing information protocol), IGRP (Interior gateway routing protocol), OSPF(Open shortest path first),EIGRP(Enhanced interior gateway routing protocol) and IS-IS(Intermediate System to Intermediate System) [1]. In this paper we have analysed and simulated a wired/wireless local area network using different routing protocols. Configuration of this different routing protocol is done by using CISCO packet tracer.

Artificial Intelligence Based Mask Detection with Thermal Scanning and Hand Sanitization Based Entry System

Ashlesha D. Mahalle, Department Of Electronics Engineering, Wainganga College Of Engineering, Napur,India
Ashish Bandre, Department of electronics and telecommunication, Wainganaga college of Engineering and management
Rahul Nawkhare, Department of electronics and telecommunication, Wainganaga college of Engineering and management

Abstract:--

The corona virus COVID-19 epidemic is causing a global health calamity so the effective protection methods is wearing a face mask in public areas according to the World Health Organization. Reports indicate that wearing face masks while at work clearly reduces the threat of transmission. Hygiene refers to the practices conducive to maintaining health and preventing ailment especially through tidiness such as washing hands etc. Hand washing helps to prevent any aliment that spread through contact. An efficient and cost-effective method of using artificial intelligence to create a safe work environment in a manufacturing environment. For face mask detection, a hybrid model using deep and classical machine learning will be presented. A face mask detection dataset consists of with mask and no mask images. we are going to use Raspberry Pi to do real-time face detection from a live flux via our webcam. Temperature measurement and non-destructive monitoring are two of the best uses for infrared thermography sensors. Changed Words Structural Changes Thesaurus Design and implement a low cost smart hand sanitizer dispenser with door controller based Raspberry Pi and Ultrasonic sensor that can help to solve the challenges faced by security guards at different stations such as bank gate, school gates, hospital gates, etc.

Keywords-

Hygiene, Hand sanitizer, Raspberry Pi, Thermopile sensor, Ultrasonic sensor, Machine Learning, python.

Eco-friendly advanced vehicle design of solar power car with real time vehicle tracking system using GSM and GPS remote control technology

Rahul Nawkhre, Assitant Professor, Electronics and telecommunication engineering department Wainganaga college of engineering and management , Nagpur ,India
Ashish Bandre, Assitant Professor, Electronics and telecommunication engineering department Wainganaga college of engineering and management , Nagpur ,India
Rupali Dasrwar, Assitant Professor, Electronics and telecommunication engineering department Wainganaga college of engineering and management , Nagpur ,India
Pratibha Motwani, Assitant Professor, Electronics and telecommunication engineering department Wainganaga college of engineering and management , Nagpur ,India

Abstract:--

The natural resources of the capacity of fuel are decreasing because of increase in fuel demand is the serious issue. The vehicle of fuel engine release the harmful gases that create air pollution which influence the balance of environment and increase the health issue of human being. As we know all world is facing the serious issue of Global warming. The best solution of these problems is the use of solar energy, which is eco-friendly. By using the solar energy we can charge a battery in the vehicle with the help of solar panel .The test output shows the efficiency of our designed solar panel that was good enough to run the vehicle motor even on normal temperature. In this paper we also focused the problem on road accidents and lack of emergency facilities availability. our project is providing the solution to this problem. In this paper also designed a effective vehicle tracking and anti theft system with the help of GPS and GSM network based technology. The GPS and GSM network system is connected to the microcontroller. The data like latitude and longitude indicating the current position of the vehicle provided by the GPS modem. On the other side the same data send to the mobile from where the position of the vehicle as required. when vehicle suffers accidents then sensors present in the vehicle will detect it and send message to the microcontroller. The microcontroller trigger and sends alert message and current location of the vehicle to the control room or rescue team using GPS-GSM network based system. As in case if the driver of the vehicle noticed that there is no more casualties then driver can terminate the alert message by the switch which is provided in the vehicular system. This system will be helpful for the rescue team to saving the valuable time. fomite trailing and locking the organization of rules installing in the vehicle to locking the engine motor and tracking the position of the vehicle. This will be continuously used for tracking the location of the theft vehicle and current status of the users. GSM module send alert SMS to microcontroller , the respected person need to send the password to the microcontroller to restart the vehicle and outdoors the door. In this project we have used mplab and simulink to design and simulate the solar photovoltaic(PV) cell. the proetus software has been used to design the microcontroller and whole circuit to get the input from mobile.

Keywords:--

Renewable energy, solar energy, voltage booster, microcontroller, GPS ,GSM modules Proetus, MPLAB, Simulink

Electronic Differential System for Light Electric Vehicles with Two in- Wheel Motors

Rahul nawkhare, Department of Electronics, Wainganga College Of Engineering & Management, (RTM Nagpur University), Nagpur, Maharashtra (India)
Trupti Thakre, Department of Electronics, Wainganga College Of Engineering & Management, (RTM Nagpur University), Nagpur, Maharashtra (India)
Ashish bandre, Department of Electronics, Wainganga College Of Engineering & Management, (RTM Nagpur University), Nagpur, Maharashtra (India)

Abstract:--

This paper deals with the design, implementation and evaluation of an electronic differential system intended for light electric vehicles. Its operation is based on splitting the torque equally for two independent brushless DC motors installed in the same axis of the vehicle and directly coupled to the wheels. This configuration allows the motors to rotate at different speeds when the vehicle traces a curve. The system also detects and corrects the slipping of any tractionwheel.

The main feature of the proposed system is that it does not require specific sensors to measure the steering angle and the speed of the drive wheels. Another important feature is that it is implemented using standard electric bicycle controllers and a general purpose Arduino platform. These components are very inexpensive and are available almost anywhere in theworld.

Key words

Electric differential, Electronic Differential, Light Electric Vehicle, Mobility efficiency, Steeringsensorless control

Impact of Demonetization on the Financial Performance of Indian Banks

Jyoti Dobhal, PhD Research Scholar , Himalayan School of Management Studies, Swami Rama Himalayan University, Dehradun

Abstract:--

Banking System of India

RBI **(**Reserve Bank of India) plays the central role in the banking system of India. This is the highest authority monitoring and controlling the entire banking system of India. RBI came into existence on April1, 1935 with the Reserve Bank of India Act 1934. Its primary function is to create and execute the monitory policies. Banking sector of India has been divided into Scheduled and Nonscheduled banks. Banks that come under second schedule of RBI Act1934 are Scheduled Banks. Such banks have their paid up capital more than Rs. 5 Lakh. Further it can be classified into Nationalized Banks, SBI and its Associates, Regional Rural Banks, Foreign Banks, Private Sector Banks, Scheduled Cooperative Banks, Urban Cooperative Banks and State Cooperative Banks. Banks fail to fulfill the prerequisites of 2nd schedule of RBI Act are kept under the category of Non-Scheduled Banks. Commercial Banks may be categorized either as Scheduled or Nonscheduled Banks. There are 21 Public sector banks overall with a large network of small and big branches with a nationwide coverage. SBI (State Bank of India) has the privilege of carrying the legacy of largest and oldest public sector bank of the nation. Among the another 22 private sector banks of the country, Axis Bank, HDFC Bank, ICICI Bank hold the major share of retail banking sector.Thus banks play pivotal role in any economic system and RBI is the main Regulatory Body of Indian Banking System.

Demonetization

Demonetization is an act of withdrawing a specific form of currency from its circulation as a legal tender. This has been a standard practice being followed by most of the world economies citing the numerous causes from time to time. Demonetization happened three times in India. First time it happened on 12th January 1946 when the RBI demonetized Rs, 1,000 and Rs, 10,000 currency notes, Second time it happened on 16th January 1978. In 1978, the government demonetized banknotes of ₹1,000, ₹5,000 and ₹10,000. Now it happened on 8th November 2016, when government announced that Rs 500 and Rs1000 banknotes would no longer be useful for public. Total value of demonetized currency amounted to 15.4 trillion and that was around 86.9% of total currency in circulation.

Demonetization Effect over Economy

Demonetization had immediate effect on liquidity. Some firms found difficulty in running their operation because of inadequacy of cash. Daily wage workers, poor people suffered more. There was the limitation on the withdrawal of money from the banks that also affected the payment of daily wage labors.

Positive impact of Demonetization over Banks

Liquidity: Demonetization increased cash deposits in the banks. There was an excessive cash inflow of Rs.500 and Rs.1000 in the banks due to which size of deposits significantly increased.

Profitability: After demonetization as public sector banks deposits increased, they invested their excess funds in government bonds. It was assumed that return on bond investment would increase 15 to 20 percent to banks earnings.

E banking: After the problem of cash shortage people moved to e- banking. Young generation, educated people started paying online for goods and services after demonetization.

Negative impact of demonetization over banks

Services: Banks could not execute other functions as banks were engaged in exchanging banned currency notes. They were unable to provide other banking services properly.

Work Life balance of bank employees: The work life balance of bank employees got affected due to this over loaded operational activity.

Lending Services: As primary work of banks was to exchange notes, so that time they were unable to provide lending service.

Objective

The objective of the study is to present the review of literature on impact of demonetization on the financial performance of Indian banks (Public and Private sector banks).

Research Methodology

The study is based on secondary data. The data required for the study is collected from the published research papers in national and international journals.

Management Challenges in Curbing and Preventing Economic Crimes in Modern Era

Arun Kumar Jain, Research Scholar, Manipal University Jaipur, India
Prof. Vijaylaxmi Sharma, Head, Department of Law, Manipal University Jaipur, India

Abstract:--

Economic crimes has been always a great challenge to management since long back. Criminals always has a sharp mind to steal money from organisations by their perverter mind particularly in the field of banking and stock market We have seen great scam harshd mehta in stock market in 1992 who given a new challenge to all management personal to review management redefined keeping in view if crime of this kind never ever happened earlier. If we see now a days every organisation management is facing as to how to find the ways before criminals so that those ways can be stopped barred to enter by any criminal.

Management has been always a tedious job but to manage ethical people of outside having criminal mind is really a herculean task. We will try to find the new challenges of management with especial emphasis on banking and stock market so that a better insight can be presented while dealing with these types of practices and there by stopping and preventing the crime and criminals in the society and organisation.

Modern threat related to cyber economic crime especially when any management has to deal smartly. Skilful workforce and enforcing staff is required to identify the loop holes of organisation in view of economic crimes.

Need of Designing Efficient Algorithm using Machine Learning Techniques for Better Diagnosis of Parkinson's Disease (PD)

Rasika Anant Deshmukh, Assistant Professor, MES' Abasaheb Garware College, Karve Road, Pune

Abstract:--

Considering medical field and branch of Computer Science called machine learning together, a lot of work have been done and going on. Various diseases such as cancer, tuberculosis, neurological disorders are under consideration for more accurate, efficient diagnosis of diseases or prognosis of diseases with the help of computer assisted systems. Algorithms designed using Machine Learning techniques have high impact in medical diagnosis systems. Restricting discussion to PD, it is a chronic progressive neurodegenerative disease that affects movements. Mainly two types of symptoms viz. motor and non-motor are observed in the PD patients. There are two major challenges doctors say in the process of diagnosis of PD. Frist, other diseases mimic symptoms of PD. Second, Diagnosis of PD depends more on clinical analysis. This paper talks about the need of designing efficient, accurate algorithm using machine learning techniques. Combination of supervised such as classification and unsupervised such as clustering may be helpful while designing the algorithm. Once algorithm has been designed, it will assist doctors during diagnosis of PD and guide them upto certain extent to overcome challenges stated above. One can consider motor- symptoms such as tremor, gait difficulties vocal problems while designing algorithm. Algorithm will work in three steps, viz. first, take quantitative readings as data input; second, process these reading using technique designed; third, give output for processed input. This output of PD diagnosis will help doctors during clinical analysis of patients. It may save time, efforts and cost of clinical analysis and will help medical field, eventually to the society and needy.

Keywords :

Machine Learning, Parkinson's Disease (PD), Motor-symptoms, Non-motor Symptoms, Supervised Learning, Unsupervised Learning, Computer-based system

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