International Journal Of Advance Research, Ideas And Innovations In Technology

VOLUME 7 - ISSUE 2

IJARIIT SPECTRUM

International Journal of Advance Research, Ideas and Innovations in Technology

March-April, 2021

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Spectrum is an e-magazine with the comprehensive collection of all the papers that have been published in our journal over the last two months — Volume 7, Issue 2 (March-April, 2021). This edition brings together 173 papers by 382 authors from 124 institutions. Each entry links to the abstract and the full paper.

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e-ISSN 2454-132X

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ABSTRACTS

1 Homeopathic Treatment Protocol for Asthma

Paper ID V7I2-1137 · Pages 1-12 · Medicine

Dr. Neal Ratan Agarwala, Independent Researcher

The protocol involves following criteria: 1. Remodeling the respiratory passage by inhibiting transforming growth factor β1/Smad signal pathway. 2. Relaxing the respiratory smooth muscles. 3. Reducing the oxidative stress marker reactive oxygen species. 4. Activating Nuclear Factor E2-Related Factor 2. 5. Managing the steps of Arachidonic Acid Metabolism Pathway. 6. Managing the Imbalance of T-helper-1 & T-helper-2 cytokines. 7. Decreasing the ratio of GATA binding protein-3 / transcription factor T-box expressed in T-cells expression levels. 8. Inhibition of Signal transducer and activator of transcription 6 expression. 9. Regulating & inhibiting the activation of Mitogen-activated protein kinase and Nuclear factor-κappa-B signaling pathways. 10. Increasing the regulatory-T cells and enhancing Transcription Factor Fork-Head Box P3 mRNA expression. 11. Inhibiting the mast cell de-granulation. 12. Inhibiting the functional differentiation of pulmonary immature DC to mature DC. 13. Reducing the dependence on Corticosteroids. 14. Improvement in symptom syndrome of Asthma. 15. Reducing the levels of Interleukin-4, and that of Interferon-γ and PEFR.

Keywords: Asthma, Homeopathy, Natural, Plants, Tincture, Protocol, Inflammation, Airway remodeling.

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2 A study on nutritional status of Kharia tribal females of Simdega District

Paper ID V7I2-1143 · Pages 13-19 · Nutrition

Shweta Rani Panda, Research Scholar, Ranchi University, Ranchi, Jharkhand
Dr. Reshma Xalxo, Associate Professor, Ranchi University, Ranchi, Jharkhand

Nutritional anemia is a major problem for women in India and more so in the rural and tribal belt. Both rural and tribal women have a heavy workload and anemia has a profound effect on psychological and physical health. Tribal women play multiple roles in a family, primarily as mothers and housekeepers, and also equally important roles as wage earners and agricultural produce. Because of the prevailing culture and traditional practices in India, the health and nutritional status of women becoming worse affected. Women simultaneously exercise roles in economic production, home production, and reproduction, often with damaging consequences for their own nutritional status.

Keywords: Nutrition, Tribal Women, Health, Nutritional Status.

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3 Improving paramedic preparedness to mass casualty incidents: an implementation study using PARIHS framework

Paper ID V7I2-1156 · Pages 20-24 · Emergency Medicine

Ahmed Alharbi, Doctrate Degree Holder, Emergency Medical Services, Ministry of Health. Kuwait

It has been observed that healthcare workers, prehospital care providers, as well as other frontline responders, are often made responsible to be both willing and able to provide a timely response in the events of disaster. Even though Kuwait is situated in a politically conflicting zone where the country has witnessed several major incidents, prehospital care providers are still not given standardized preparation training to respond to these incidents of disaster. There is also a lack of evidence related to the ambulance staff's preparedness status in Kuwait to manage disasters. Moreover, to evaluate the socio-contextual factors related to the implementation procedures of mass casualty training, limited studies have been conducted in the existing body of literature. Problem: This study has tried to address the problems or barriers that are undermining the preparedness of prehospital care providers under the events of disaster or mass causality by utilizing the PARIHS model.

Keywords: Paramedic, Disaster Medicine, Mass Casualty, Professionalism, PARIHS Framework, Leadership

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4 NPA Management using Blockchain

Paper ID V7I2-1152 · Pages 25-38 · Computer Science And Engineering

Manas Protim Deka, Student, Christ (Deemed To Be University), Bengaluru, Karnataka

The usage of Blockchain Technology has been increasing rapidly across the various business sectors. Multiple industries across various sectors are adopting it for its immutability, transparency, tamper proof-ness, and its distributed nature. As such, the banking industry is looking at it intently to solve a variety of problems it currently faces. One of them is NPA management. Especially in India, this is a big issue as the rate at which NPAs are growing is very high. This paper aims to find a potential solution to this problem by developing a blockchain model conceptually which uses smart contracts to effectively manage NPAs. Timers or Loop code concept in a smart contract has been utilized to keep track of a loan as it becomes an NPA. Different scenarios have been provided to explain the working of the concept. An example use case has been elaborated upon as well. The paper developed a conceptual model that is effective in managing NPA as well as it provides a scope for government, NPA as well as external auditors to monitor the state of NPAs of a bank. This paper also provides the scope to further develop the model by creating a working blockchain-based model.

Keywords: Blockchain, NPA (Non-Performing Asset), Smart Contract, Timers, Conceptual Model

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5 Widening opportunity gap between students due to Covid-19

Paper ID V7I2-1170 · Pages 39-42 · Economics

Amala George, Assistant Professor, St Pius Xth College, Kasaragod, Kerala

The covid 19 shutdown has created far-reaching changes in the education system. There occurred a sudden

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shift to the online mode of instruction in the blink of an eye. The study intends to find out evidence of any kind of disparity in the distribution of academic opportunity between lower-income students and their better-off peers. It is conducted by using a qualitative research approach. Economic turbulence caused by the covid-19 situation has led to many economic issues in an average family and it has a direct effect on students' personal and academic life. The quality of e-learning services and facilities provided to the students are also assessed as a part of the study.

Keywords: Opportunity Gap, E-Learning Facilities, Covid-19

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6 Chennai media student's impressions over the ever-evolving media industry

Paper ID V7I2-1165 · Pages 43-48 · Media Education

A. Aiswarya Lakshmi, Student, Hindusthan College of Arts and Science, Coimbatore, Tamil Nadu

Social media has become a dominant characteristic of much of the lives of the people, including journalists in all disciplines. Several media outlets have come to rely on online news, much of it coming from social media sites like Facebook and Twitter. While several studies have examined the use of technology and social media separately and how students can learn in today's digital age, here is a research on the use of social media by young media students and how they see both their news reporting & gathering skills and the profession itself. This research involves the purposive sample method and the survey of 203 current, undergraduate pre- media students at a large, in Chennai. This study also involves three frameworks, including the use of technology and social media, the perception of media education, and the perception of the media industry, to find out how young journalists feel about their journalism studies in a changing industry.

Keywords: Media Education, New Media, Media Industry, Social Media, Chennai.

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7 Analysis and allocation of human resources and machinery in a building project

Paper ID V7I2-1164 · Pages 49-50 · Civil Engineering

Shruti Leeladhar Khatu, Student, Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra
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Rutuja Mhatre, Student, Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra
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Ganesh Surywanshi, Teacher, Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra

Planning and scheduling are important jobs in construction projects. In this project analysis and allocation of human resources and equipment will be done in commercial plus residential building to increase productivity and the collected data were analyzed using the MS project software. The time and cost of the project are most important for the success of the project. Selecting skilled labor, unskilled labor, and allotting them to a

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particular work at a particular time is a difficult task. Continuous monitoring of the workforce is important as it includes the cost of projects that show to increase and delay of projects. In this study, a case of commercial and residential building has been taken to display how proper planning and scheduling is done using the Microsoft project. Good project management in construction is the efficient utilization of labor and equipment. The selection of the appropriate type and size of construction equipment /influences the required amount of time and effort and productivity of a project. Proper utilization of human resource management techniques to avoid shortage of labor. The project may have a simple goal that does not require many people or a great deal of money or it may be quite complex, calling for diverse skills and a plethora of resources. But the bottom line is that each one of us manages projects. Owing to this the purpose of dealing with the project should not be only execution but effective and efficient execution of the project is necessary which is needed to be highlighted. The collection of the suitable type and size of construction equipment often pretends the required amount of time and effort and thus the job-site productivity of a project. This thesis is to study the management of equipment and human recourses practices in the Construction Industry. There is a number of incidents taken place in the construction industry that leads to various issues which cause the project cost to increase and fall behind the program. The findings revealed that Cost is majorly considered by the employees in construction projects with respect to interest projects, Time is the second thing that is important in construction projects and eventually Quality is given least preference by the employees of the construction companies as it has importance in the construction projects. The usefulness of construction machinery is a major factor that differentiates construction companies in terms of heavy construction and light construction.

Keywords: Planning, Scheduling, Construction, Machinery

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8 IoT based smart agricultural system

Paper ID V7I2-1159 · Pages 51-54 · Electronics And Telecommunication Engineering

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Dr. Ms. R. P. Labde, HOD, Amrutvahini College of Engineering, Sangamner, Ghulewadi, Maharashtra

The agriculture field plays a vital role in the development of agriculture. In a country like India, this issue is very important because almost 60% of peoples are depending on agriculture, and these peoples are from rural areas. For that instance, there is a solution to this problem is by doing smart agriculture by considering the current traditional methods of agriculture. Hence, this proposed paper aims at making IoT Based Smart Agricultural System. Using sensors, analyze, monitor, and selecting crops, etc. The controller takes the input data from the sensors, and then it processes the entire system after integrating all the peripherals along with the software. This project is working in three phases, [1] Taking the data from the sensors, Sending that data to the Atmega 328 pi controller, and Controlling the device as per the data obtained. The software used for this is Arduino UNO. In this Paper, Sensors are used for sensing the different parameters such as Humidity and Temperature, Smoke, Level, and Light, etc. Atmega 328 pi is controlled by all parameters. The outputs are shown manually onto the LCD, and through the Webpage using IoT. The buzzer used for the alert notifications.

Keywords: DHT11, CO2, IoT (Internet of Things), Liquefied Petroleum Gas (LPG), Sensors

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9 Effect of austenitizing temperature on the bainitic ferrite transformation during hot induction bending of line pipe steel

Paper ID V7I2-1160 · Pages 55-59 · Metallurgy

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The present work is about the effect of austenitizing temperature on the bainitic ferrite transformation during hot induction bending of line pipe steel of grade API X65 PSL-2. The essential characteristics of the pipeline were first manufacturing by hot rolling the plates by thermo-mechanical control process(TMCP) and after followed by the pipe making process by JCOE forming route and finally the line pipe subjected to the hot bending process. During hot bending the line pipe exposed to localized induction heating followed by water cooling. Bend portion of the pipe examination carried with respect to microstructure and mechanical properties normally strength, toughness, and hardness. The results showed that significant microstructural changes observed by varying austenitizing temperature, at a high austenitizing temperature of range between 950-990°C the resulting microstructure found very fine bainitic ferrite & ferrite well exists intragranular in prior austenitic grain(PAG) pockets. The hot bend pipe of the resulting microstructure greatly improved the strength and toughness of the line pipe steel.

Keywords: Line Pipe, Austenitizing Temperature, Bainitic-Ferrite, Tensile Strength, Induction Bending

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10 Effects of using utility water with infectious bacteria for commercial fish storage and market selling

Paper ID V7I2-1161 · Pages 60-63 · Microbiology

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T. A. Qureshi, Professor, Barkatullah University Bhopal, Madhya Pradesh

Fish is one of the best protein sources available to mankind in quality as well as quantity. It is used as a staple food in countries with long coastlines and extensive inland water resources. It is a valuable source of vitamins like A, B, iodine, and oils containing polyunsaturated fatty acids. However, in all flesh food, fish is the most susceptible to tissue decomposition, rancidity development, and microbial spoilage. Fish quality is directly related to bacterial load, which itself depends upon the conditions of transport, handling, and processing. The water used for fish washing is mostly contaminated with infectious spoilage organisms and pathogens. The ice which is used to preserve fish, primarily in fishing trawlers, landing centers, and local markets, is also contaminated heavily with micro-organisms.

Keywords: Aeromonas Hydrophilla, Pseudomonas Fluorescent, Shigella Spp., Salmonella Spp., Listeria Monocytogenes, Escherichia Coli, and Fecal Coliforms

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11 Incidence and Etiologic of surgical site Infections among surgery patient in India: A literature review

Paper ID V7I2-1154 · Pages 64-66 · Medical

Dr. Karan Yagnik, Research Scholar, Mayo Clinic, Ahmedabad, Gujarat

SSI is a major cause of Morbidity, longer postoperative hospitalization, complication, and patients. Despite Modernization, SSI remains a major cause of patients' dissatisfaction we can learn from existing Literature. We have lots of information which could be summarized all over, Internal (caused by patients body) external (caused by an outside source) has been discussed the variance in protocols and practice has been observed.Use and choice of antibiotics and multivitamins are discussed. How to detected and control Community Acquired

Keywords: Community-Acquired, Hospital Acquired SSI, Surgical Site Infection

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12 Understanding the various threats and solutions to unity in diversity in contemporary India

Paper ID V7I2-1176 · Pages 67-69 · Social Science

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The British government was quite their administration from South East Asia in 14th and 15th of August 1947. Later the republic with the constitution of India came into effect on the 26th of January 1950. Article one reveals that India which is Bharat shall be a Union of States. It is revealing that in the history of the world, there was no country in the name of India. Under the Republic of India was united of various nations with extreme diversity in terms of food, clothes, culture, mother tongue, etc. Hence, it is the fact that as long as we give respect to the diversity of Indian nationalities we may expect unity. On the other hand, if we neglected to give respect to diversity the republic of India will not retain it. Keeping these as background this article reveals that the various elements which are threats to the unity of India.

Keywords: Threats, Unity, Diversity

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13 Secured and robust E-voting system using blockchain technology

Paper ID V7I2-1171 · Pages 70-72 · Bloackchain

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Voting is the process of representation of democracy in a country. Voting systems have been around for hundreds of years and but they were evolving very slowly. Many solutions were proposed in history, but most of them were rejected because of some security issues and limitations. Finally, in the 21st century, e-voting

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systems started to bloom with the development of web technologies With the development of blockchain 2.0, the researchers started to go towards a new destination by applying blockchain to software engineering applications. E-voting systems were developed based on Ethereum as well as Z-cash and bitcoin. But they were not full e-voting frameworks. Due to the limitations of the proposed solution, those were unable to exist in the modern world. To maintain user privacy, zk-SNARK which is a concept used in Z-cash for maintaining private transactions can be used. To write Immutable codes, a concept called smart contract can be used. Thus by using ethereum and z-cash blockchain technologies we can implement a full e- voting framework with voter registration, voter verification, voting, tallying, and end to end verification.

Keywords: E-Voting, Blockchain, Ethereum, Smart Contracts, Z-Cash, Zk-Snark

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14 Comparative analysis of segmentation techniques for foot thermogram

Paper ID V7I2-1190 · Pages 73-78 · Image Processing

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The prevalence of diabetes mellitus in the Indian population is approximately 8.9% which is 77 million people. One of the most recognized issues in diabetic Mellitus patients is foot ulceration which is indicated by an abnormal rise in the temperature of the foot plantar. According to the International diabetic federation, every 15 people out of 100 get affected and there is a 6 percent of chance getting foot ulcers. Early identification and treatment of ulcers of the plantar skin will be beneficial to reduce the treatment cost and avoids amputation. Thermal imaging methods are one of the best, easiest and repeatable techniques to monitor the progress of foot ulcerations. Image processing enables doctors to make quick decisions in diagnosing the severity of the infection. In this paper, a sample foot thermogram is utilized for applying segmentation techniques such as region growing, clustering, and active contour for the extraction of the region of interest. The segmented results are compared for the performance using the Jaccard index, Similarity index Dice coefficient, and Volume similarity. The results show that the Snakes algorithm as a segmentation technique gave 85 % accuracy in extracting the RoI successfully.

Keywords: Diabetes Foot, Thermography, Segmentation Techniques, Active Contours, Region Growing, Clustering

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15 A Study to compare the effect of Fenugreek vs Cinnamon on Blood Sugar among Type-II diabetic patients

Paper ID V7I2-1182 · Pages 79-80 · Nursing

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The present study was conducted to assess the effectiveness of Fenugreek Vs Cinnamon on Blood Sugar among Diabetes patients at Sree Mookambika Medical College Hospital, Kulasekharam, Kanyakumari District. A

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Quantitative Evaluative approach was adopted to compare the effectiveness of Fenugreek verses, Cinnamon, on Blood Sugar levels among type-II Diabetes patients. The study design adopted was an Experimental design, Factorial in nature. The samples were selected Purposively and Randomly assigned. The effectiveness of the two interventions was compared. The sample size was estimated by power analysis prior to the commencement of the study was N=4pq/d2. The Mean of Mean difference of FBS in the Fenugreek group, -10.42 (SD 10.093) was greater than the Mean of Mean difference of FBS in the Cinnamon group -5.88 (SD 9.639) and t =-2.516 (

Keywords: Fenugreek, Cinnamon, Blood Sugar, Diabetes Patients

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16 Fundamental of Physics

Paper ID V7I2-1180 · Pages 81-124 · Physics

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Science is nothing but to study natural laws. The technology is to implement natural laws in Mfg. machines, equipment, and instruments. No one is capable to change or challenge natural laws. Natural laws are not obeying our scientific equation, theory, mathematics, or constants all have some limitations and also always not true. We depend only on electromagnetic waves /forces but in-universe there may be other types of waves/forces in existence that we are not able to detect because those are beyond our limitations

Keywords: Electromagnetic Waves, Attraction Repulsion Force, Gravitational and Centrifugal Force, Mass and Free Energy, Dimension and Time

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17 The smart voting system through facial authentication

Paper ID V7I2-1197 · Pages 125-128 · Computer Science

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Decisions are critical depicting qualities of any predominant part that chooses a system that is being coordinated by individuals passing on their decisions or sensible choices through projecting a surveying structure. As of now, the larger part rule instrument has made from a wide edge of direct actually made majority rule designs to online vote-based frameworks. This undertaking expects to assemble a sharp evenhanded design utilizing face certification progression that permits any inhabitant in INDIA by going to their individual body electorate from "Any place in the country(India)" to the closest stoppage in the spot of stay. This undertaking is utilized to keep up High-level biometric security. The balloter subtleties are dealt with in an instructive file with face recognition. Going before beginning the larger part rule cycle the individual ought to login with two checks. The Tkinter application programming keeps up GUI for the entire undertaking. In the "savvy lion's share rule framework" when an individual makes his choice, the Tkinter gives the accreditation message that the vote is effectively chosen and if an individual's age is under 18 years old in the event that he tries to project a democratic structure, in the long run, utilizing his face test, the Tkinter page will show that he

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can't project a surveying structure. The political race commission can log in and check the inhabitant outline of the Election. These are completely written in python.

Keywords: Smart Voting, Election, Python, GUI, Face Recognition

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18 Study of knowledge of mothers on immunization of children and its associated factors in Chennai, India

Paper ID V7I2-1189 · Pages 129-134 · Health

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Dr. Vijayalakshmi K., Professor, Apollo College of Nursing, Chennai, Tamil Nadu
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Immunization is one of the most effective and cost-effective ways to protect children's lives and futures. Knowledge of mothers on immunization plays a major role in the immunization of the children. This study was conducted to assess the knowledge of mothers on immunization of the children. This was a cross-sectional study, conducted among 120 mothers who were selected using the purposive sampling technique, in 2020 in Chennai, India. Mothers having children below the age of 5 years were included in the study. Data were collected by interviews at their homes using a pretested, predetermined, and structured questionnaire. Data is entered in Excel and analyzed in SPSS 20 using appropriate descriptive (f, %, Mean, and SD) and inferential statistics (t-test, ANOVA, and chi-square test). The mean knowledge score on immunization was 10.75/20. The majority of the mothers had moderately adequate knowledge (63.3%), followed by inadequate knowledge (30%), and only 6.7% of them had adequate knowledge. Regarding immunization coverage, the majority of the children were fully immunized in time (74.2%), followed by delayed immunization (15.8%) and only 10% were non-immunized. Mothers' knowledge on immunization status was significantly associated with residence (Living area, t= 2.13, p=0.035) and educational status of the mothers (F= 0.0979, p= 0.379). Collected data is entered in Excel and analyzed in SPSS 20 using appropriate descriptive (f, %, Mean, and SD) and inferential statistics (t-test, ANOVA, and chi-square test). Educating mothers about immunization focusing on its benefits and cost-effectiveness using various strategies should be planned to increase the mothers' knowledge on immunization and immunization coverage.

Keywords: Children, Immunization, Knowledge, Mothers

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19 Design of automotive pamper suspension system

Paper ID V7I2-1199 · Pages 135-136 · Mechanical Engineering

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This work presents the design of suspension system of automobile which is based on study of the effects of air when the vehicle is in motion and this was focused on optimum size, angle, and shape of the spoiler. The spoiler or winds are the additional attachments used for an automobile which controls the flow of air and lift

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and it reduce suspension of the system. By reducing lift and drag forces with better traction control of the wings and the mileage of the vehicle will be improved. The wings in an automobile are used to decrease the lift force and have to control over traction. This concept of the design has an adjustable wing which can be altered as per their requirement. As they are adjustable, they can be rotated along a single axis which helps in to change the drag on the vehicle thus resulting to increase the mileage of the vehicle. They are placed on the rear side window of the vehicle.

Keywords: Drag Force, Lift Force, Pamper, Spoiler

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20 Comparison of Health Care Systems in the United States and Canada

Paper ID V7I2-1202 · Pages 137-140 · Public Policy

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Insuring access to quality healthcare to the citizens is one of the fundamental responsibilities of a ‘Welfare State’. The purpose of this research paper is to compare health care systems in two highly advanced industrialized countries: The United States of America (USA) & Canada. The research paper will provide a description of the health care systems in USA & Canada while exploring historical-cultural & political-structural causes of embarking upon divergent paths to health reform. Further, the paper will analyze their healthcare policies and evaluate them against parameters of ‘equity’ & ‘efficiency’. Finally, USA & Canada’s response to COVID-19 will be assessed to determine whether the government financed universal health-care system of Canada or the combination of government-financed group-specific health coverage and private health insurance in USA is a panacea for public health emergency?

Keywords: National Health Insurance, Single Payer System, Multi Payer System, Global Budget Payments, Medicare, Medicaid

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21 Object locator and pathfinding robotic arm

Paper ID V7I2-1210 · Pages 141-144 · Mechanical Engineering

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Programming a robotic arm to perform a specific task is time-consuming. This project proposes a novel implementation of self-learning and Neural Network (NN) based specifically designed and 3d printed Robotic Arm fixed on a rover which navigates its path through Simultaneous localization and mapping(SLAM) for the multipurpose application using ROS. The arm uses forward and inverse kinematics to calculate the angle of rotation in each motor to get the required position and then picks the object from the detected object which is done by a Convolution Neural Network from the required object’s dataset.

Keywords: Neural Network (NN), Inverse kinematics, Robotic Arm, Tensor Flow, SLAM

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22 Face Identification and Liveness Detection using CNN for Automated Attendance System

Paper ID V7I2-1204 · Pages 145-148 · Computer Science And Engineering

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A real-time automated attendance system is designed using the method of live face detection and recognition. The system supports multi-user attendance and face liveness detection at the same time. The system can automatically collect face data, that will be saved in the specified dataset folder of each individual person obtained during the registration process. The face detection part of the system is based on Haar Cascade Classifier, and the face recognition part is based on the Local Binary Pattern Histogram algorithm. The algorithm implementation is based on Keras and TensorFlow framework, and the face liveness detection part is based on CNN that creates a 3D model of face detected to differentiate between real and fake images. The attendance system is written in Python language, and the user interface is designed by pywebview library. The experimental results show that the system achieves a good performance in real-time face recognition.

Keywords: Liveness detection, Face recognition, Haar Cascade Classifier, LBPH, Keras, CNN, Automated attendance.

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23 LISA (a web-based chat-bot for college website)

Paper ID V7I2-1205 · Pages 149-150 · Information Technology

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A chatbot is a piece of software that conducts a conversation via auditory or textual methods. Such programs are often designed to convincingly simulate how a human would behave as a conversational partner. A chatbot for a website is a chatbot that lives on your website LISA(LICET Interaction Service Assistant) is a web chatbot that helps the viewers or the users of the official website easily be able to access the information from the website that is difficult to reach. LISA is an emotionally intelligent chatbot that identifies the user's vague request and scores with positive and negative intents.

Keywords: chatbot, artificial intelligence, Dialogflow, Kommunicate, sentiment analysis.

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24 A model to predict Covid-19 epidemics with application to India, China and Pakistan

Paper ID V7I2-1213 · Pages 151-156 · Mathematical Applications

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In this work, our group builds up a differential conditions model of Coronavirus pandemics. We will probably anticipate forward in time the future number of cases from early detailed case information in areas all through the world. Our model consolidates the accompanying significant components of Coronavirus pandemics: (1) the quantity of asymptomatic irresistible people (with exceptionally gentle or no indications), (2) the quantity of suggestive announced irresistible people (with extreme side effects) and (3) the quantity of indicative unreported irresistible people (with less serious manifestations). We apply our model to Coronavirus plagues in India, China and Pakistan.

Keywords: COVID-19 epidemic, reported and unreported cases, isolation, quarantine, public closings

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25 A survey, novel approach to detect Alzheimer’s disease at an early stage

Paper ID V7I2-1209 · Pages 157-163 · Biomedical

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Alzheimer's disease is one of the most common neurodegenerative disorders that predominantly affect memory. This happens when neurons lose their structure and function over time. Since there is currently no cure for Alzheimer's disease, it is important to identify the disease early and to slow its development as much as possible. Various computational approaches have been used in various studies to diagnose Alzheimer's disease. The main purpose of this paper is to analyze feature extraction and classification algorithms in order to determine the best method for diagnosing Alzheimer's disease. The following sections make up this paper: (i) a brief overview of the disease and the case; and (ii) a study of feature extraction and classification algorithms

Keywords: OASIS, ADNI, MRI, SVM, Neural Network

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26 Smart sanitation system

Paper ID V7I2-1229 · Pages 164-166 · Internet Of Things

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According to India Today, 80% of 1.5lakh metric ton daily garbage remains exposed which can cause cholera,

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dysentery, typhoid, etc. Unhygienic toilets can result in urinary tract infections, hepatitis, E.coli, etc. Proper sanitation and timely maintenance are necessary to bring this number under control. While awareness is an important tool in India, we also need to start developing sustainable models of greener and smarter cities that use analytical solutions to solve problems faced by millions of people universally. When it comes to building smart cities for a greener tomorrow, proper sanitation, clean toilets, and efficient waste monitoring systems play an important role. Therefore to overcome the challenges faced in developing a better sanitation system, the proposed solution explores, primarily developing sensor-enabled solutions to improve waste monitoring and toilet sanitation across cities.

Keywords: Microcontroller, Ultrasonic Sensor, Moisture Sensor, Turbidity Sensor, NRF Module, IR Sensor, ESP32, MQTT,

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27 Wireless smart helmet with sensors for accident detection

Paper ID V7I2-1220 · Pages 167-168 · Information Technology

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In Countries like India, the major challenge is safety for two-wheeler riders. The rapid growth of two-wheeler vehicle road accidents is evident. According to a report by the National Crime Records Bureau (NCRB) In India, almost 2 lakh people die annually due to two-wheeler accidents. The government is forcing drivers to wear a helmet during driving but many of the riders are not following the rules. We would like to help society through our project, we would try to reduce the probability of deaths caused by two-wheeler vehicle accidents. In this project, we are introducing a Wireless smart helmet system that detects a person is wearing a helmet or not, and also the system can detect whether the person is drunk, here we have a Bluetooth transmitter in the helmet and a Bluetooth receiver at the bike. Two pushbuttons will be there to check whether the person is wearing the helmet or not. And an alcohol sensor is placed inside the helmet near the mouth of the rider to see whether the rider is drunk. If the accident takes place location of the accident will be sent to the predefined emergency contacts and there will be a buzzer sound and flashlight to grab attention so that the person gets immediate help. There is also another feature posture correction using haptic feedback which helps maintain the good posture of the rider. In this system, there is a switch that ensures the placing of the helmet properly. The conclusion of this paper is to prevent the accident while driving in the vehicle.

Keywords: Human Safety, Helmet, Arduino, Bluetooth Connectivity, Two-Wheeler Vehicle, Road Accidents

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28 A new interleaved ZVS resonant converter using Dickson capacitor configuration

Paper ID V7I2-1215 · Pages 169-175 · Power Electronics

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A New Automatic Interleaved Dickson Switched-capacitor Converters (AIDSCC) and its ZVS resonant

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configuration are proposed. Different from the traditional Dickson switched-capacitor converter (SCC), the AIDSCC has a symmetrical configuration with functions of interleaved input current, small output voltage ripple, and decrease peak capacitor voltage strain. To improve the line regulation capability, one small resonant inductor is inserted and two bulky capacitor banks are changed through two smaller resonant capacitors, forming the Resonant AIDSCC. The transistors are ZVS became on and diodes are ZCS grew to become off through running above the resonance. With frequency modulation inside an affordable range, the voltage-gain variety of the Resonant AIDSCC is elevated substantially, even as sacrificing the most performance due to the higher conduction loss.

Keywords: Switched-Capacitor Converter (SCC), Automatic Interleaved Dickson SCC (AIDSCC), Resonant Switched-Capacitor Converter (RSC).

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29 Voluntary disclosure practices- A comparative study of top public and private sector banks in India

Paper ID V7I2-1242 · Pages 176-178 · Commerce

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A voluntary disclosure practice plays a major role with respect to stakeholders. It creates a high quality of financial and non-financial information which is useful for the stakeholders to make the decisions. The voluntary disclosure practices provide the information to the stakeholders to make the investment decisions. Therefore, it is necessary for every bank to make timely and full disclosures in the annual reports of the banks. This paper is an attempt to examine the voluntary disclosure practices prevailing in commercial banks in India. In addition to this, a comparative analysis of voluntary disclosure practices of public sector banks and private sector banks in India for the period 2018-2021.

Keywords: Disclosures, Banks, Stakeholders

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30 The feasibility of using Supercritical CO2 cascade cycle in the combined cycle

Paper ID V7I2-1203 · Pages 179-184 · Chemical Engineeering

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Electricity is a form of energy that expected to be increased and grown in most industrial sectors. The Gas turbine (GT) the equipment used to convert natural gas to electricity because it is cleaner than other fossils fuels. Using a stand-alone GT has many disadvantages like the low efficiency which about 30-40 % and most importantly is the waste of energy that goes through the exhausted gases. The bottom cycle is a solution to recover this energy. Commonly, heat recovery steam generation (HRSG) is used to utilize the waste energy but using HRSG is considered not efficient although it can increase the system efficiency to 60 %. The cycle used to recover the heat is called also a bottoming cycle. Besides, the requirement of the weight and space availability in mature onshore fields and offshore fields. The sCO2 cycle is considered a promising alternative bottoming cycle due to the additional produced power and also its compactness. This study evaluates the cascade sCO2

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cycle used by (Kim et al., 2017) in comparison with the traditional steam Rankine cycle. To make this comparison fear, once through (one-stage) is combined with the bottoming cycle. The base case was remodeled by Aspen HYSYS software and was validated with the existing topping cycle a bottoming cycle studied by (Følgesvold et al., 2017). The thermodynamic analysis was evaluated to show the possible increase in the produced power. the results indicate that the cascade sCO2 cycle produces higher power.

Keywords: Chemical Engineering, Combined Cycle, SCO2

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31 Reversible data embedding using difference expansion scheme for watermarking

Paper ID V7I2-1222 · Pages 185-187 · Image Processing

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Reversible Data Embedding is a lossless reversible data embedding technique that embeds invisible data known as payload into the input image and uses the Difference Expansion (DE) technique. This paper uses a DE-based reversible scheme to reduce the amount of auxiliary information embedded and to increase the watermark length. The key concepts discussed in this paper are: Reversible Embedding, Extraction, and Restoration of the original dataset with minimal distortion. By observing redundancy, reversibility can be explored. Payload, PSNR, and Watermark Length have been used to assess the effectiveness of DE. Four data sets have been used - Lena, Boat, Airplane, and APC. For Lena, the payload obtained is 31.14 and the payload was found to be 0.76 implying that more information can be embedded in an image than in the standard methods.

Keywords: Data Embedding, Difference Expansion, DE, Reversible Data Embedding, Watermarking, PSNR, Payload

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32 Coronavirus: A challenge that influenced nearly all fields of science

Paper ID V7I2-1230 · Pages 188-190 · Microbiology

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While the world was busy in fighting over toilet papers, scrolling the memes down the social media, binge watching TV all day long and getting beaten up by police for getting outdoors, there were some people in white coats out there who were working for day and night in the laboratories all around the globe. It was first used in print in the year 1968 by an informal group of virologists in the journal Nature to designate a new family of viruses. The name refers to the characteristic appearance of virions (which is the infective form of the virus) by electron microscopy, which have a fringe of large, bulbous surface projections which make the structure of virus resemble the structure of solar corona or halo. This morphology in coronavirus is created by the viral spike peplomers, which are proteins on the surface of the virus. Out of the wide range of coronaviruses the one

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causing COVID-19 in humans and which also is the biggest challenge for science is caused by the Severe Acute Respiratory Syndrome Coronavirus 2 or better said SARS-CoV-2. We are unaware of the reason, but the spikes on the surface of coronavirus are just the right shape to lock onto these ACE2 enzymes and bind tightly. Scientists of many fields have jumped in the race to defeat the coronavirus. But what is the use of this in the fight against coronavirus? The whole world is in the midst of a COVID-19 pandemic. When a safe and effective vaccine is found, COVAX have decided to facilitate the equitable access and distribution of these vaccines to protect people in all countries.

Keywords: Coronavirus, COVID-19, Viruses, Microbiology, Quantum Biology, Quantum Computers, Health, Pandemic

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33 Face detection and emotion recognition system

Paper ID V7I2-1245 · Pages 191-195 · Computer Science

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Recognizing Human facial expressions and emotions by computer is an interesting and challenging problem. Recently there has been an increasing interest in improving the interaction between humans and computers. The face is a feature that can differentiate from person to person. Emotion is expressed through face, body gestures, and speech. Emotions through faces vary from situation to situation and person to person. The Face Detection and Emotion Recognition System automatically recognizes the faces and emotions of the persons accurately in an image. The convolutional neural network concept applied with machine learning and image processing is used in classifying universal emotions such as Happiness, Sadness, Anger, Disgust, Surprise, Fear, and Neutral. Color images that are showing the human faces are given as input to the detection system. This face emotion recognition system mainly consists of four steps. They are Image Pre-Processing, Face Detection, Facial Feature Extraction, and Emotion Recognition. Image Pre-Processing is a step to change the image in Binary or Grayscale format and resizing the image in 48x48 pixels. Face detection is a method and that is capable of verifying or identifying and capturing the frames of the faces from an image. Feature extraction is a method to identify the characteristics of the person's face captured in the image and comparing the faces in the image whether the faces of the persons are the same or not. In the final step, Emotion recognition is trying to acquire the various expressions of emotions that a person can make through their faces to communicate with each other. In emotion recognition step it can predict the emotion of the person in any kind of images or videos. This system can detect the faces and recognize the emotion of the person accurately by considering the live feed camera images and pre-existing image and video clues.

Keywords: Face Detection, Emotion Recognition, Convolutional Neural Networks

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34 Predictive classification of breast cancer using machine learning

Paper ID V7I2-1247 · Pages 196-201 · Health Care

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Breast cancer is a disease in which cells in the breast grow out of control. There are different kinds of breast cancer. The kind of breast cancer depends on which cells in the breast turn into cancer. Breast cancer can begin in different parts of the breast. A breast is made up of three main parts: lobules, ducts, and connective tissue. The lobules are the glands that produce milk. The ducts are tubes that carry milk to the nipple. The connective tissue (which consists of fibrous and fatty tissue) surrounds and holds everything together. Most breast cancers begin in the ducts or lobules. Breast cancer can spread outside the breast through blood vessels and lymph vessels. When breast cancer spreads to other parts of the body, it is said to have metastasized. Advances in screening and treatment for breast cancer have improved survival rates dramatically since 1989. According to the American Cancer Society (ACS), there are more than 3.1 million breast cancer survivors in the United States. The chance of any woman dying from breast cancer is around 1 in 38 (2.6%). The ACS estimate that 268,600 women will receive a diagnosis of invasive breast cancer and 62,930 people will receive a diagnosis of noninvasive cancer in 2019. In the same year, the ACS report that 41,760 women will die as a result of breast cancer. However, due to advances in treatment, death rates from breast cancer have been decreasing since 1989. However, The required facility for diagnosing cancer accurately and at the earliest stage using the results of the biopsy is not available to all general hospitals. Identifying and diagnosing cancer at the earliest stage is crucial as the possibility of cancer spreading increases. Therefore, A computerized system that identifies cancer at the earliest stage with minimal time with the greatest accuracy and which reduces cancer recurrence and mortality has to be developed. This paper concentrates and summarises the different machine learning algorithms which may be implied in cancer diagnosis to improve the accuracy of the diagnosis and identification.

Keywords: Random Forest (RF), Conditional Inference Tree (CT)

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35 Military-jihadist nexus in Pakistan

Paper ID V7I2-1232 · Pages 202-208 · International Relations Geo-politics

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The advent of the religious right-wing as a formidable political force in Pakistan seems to be an outcome of direct and indirect patronage of the dominant military over the years. Ever since the creation of the Islamic Republic of Pakistan, the military establishment has formed a quasi-alliance with the conservative religious elements who define a strongly Islamic identity for the country. The alliance has provided Islamism with regional perspectives and encouraged it to take advantage of the concept of jihad. This trend found its most blatant manifestation through the Afghan War. Thanks to the centrality of Islam in Pakistan’s national identity, secular leaders and groups find it extremely difficult to make a national consensus against groups that describe

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themselves as soldiers of Islam. Using two case studies, the article argues that the political survival of both the military and therefore the radical Islamist parties is predicated on their tacit understanding. It contends that without the de-radicalization of jihadis, the efforts to 'mainstream' them through the electoral process have huge implications for Pakistan's political system also for prospects of regional peace.

Keywords: Pakistan, Islamist, Jihadist, Red Mosque, Taliban, Blasphemy, ISI, TLP, Musharraf, Afghanistan, Military

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36 Emotional intelligence, personality and mental health among sportsperson

Paper ID V7I2-1246 · Pages 209-218 · Psychology

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The present study was undertaken to investigate differences between emotional intelligence, personality, and mental health among sportspersons and non-sportspersons by Shivani Nishad under the supervision of Dr. Monika Gwalani. Sample of the study 100 sportspersons(50) and non-sportspersons(50). The hypothesis of the study is that there is a statistically significant difference in the measure of emotional intelligence, personality, and mental health among sportspersons and non-sportspersons. Pethe and Hyde's emotional intelligence test, Neo five-factor inventory, and Jagdish and Srivastava's mental health inventory used for the study. In order to assess the statistically significant difference between sportspersons and non-sportspersons on the measure of emotional intelligence, personality, and mental health by 't' test. There is a statistically significant difference in the sub-dimensions of measure of emotional intelligence which are- self-awareness, self-motivation, emotional stability, managing relations, and altruistic behavior. There is a statistically significant difference in the dimensions of the measure of personality which are- Extraversion, Openness, and Conscientiousness. There is also a statistically significant difference in the sub-dimension of the measure of mental health and they are- Positive Self-Evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes, and environmental-mastery. The implications of the outcome are that indulgence in physical activity makes a person physiologically fit and also psychologically and mentally fit. Physical activities are an easy, inexpensive, and appropriate strategy and approach that should be emphasized to increase mental health in adolescence. The results indicated that there is a higher level of emotional intelligence and mental health among the sportsperson than non-sportsperson also a statistically significant difference in dimensions of personality i.e. extraversion, openness, and conscientiousness.

Keywords: Sportsperson, Emotional Stability, Mental Health, Physical Activity

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37 Detecting autism from facial image

Paper ID V7I2-1181 · Pages 219-225 · Computer Science

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Autism is a serious developmental spectrum disorder that puts constraints on the ability to communicate

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linguistic, cognitive, and social interaction skills. Autism spectrum disorder screening is the process of detecting potential autistic traits in an individual where the early diagnose shortens the process and has more accurate results. The methods used to predict the presence of autism by doctors involve physical identification of facial features and questioners, this conventional method of diagnosis needs more time, cost and in the case of pervasive developmental disorders, the parents feel inferior to come out in open. Therefore, a time-efficient and accessible ASD screening are imminent to help health professionals and inform individuals whether they should pursue formal clinical diagnosis or not. A screening tool that could identify ASD risk during infancy offers the opportunity for intervention before the full set of symptoms is present. The proposed model by using a convolution neural network classifier helps in predicting the early autistic traits in children through facial features in images, with the least cost, less time, and a greater amount of accuracy when compared to the traditional type of diagnosis.

Keywords: Autism Spectrum Disorder, Early Diagnosis, Deep Learning Technics

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38 Plant leaf disease detection by Features Selection and Learning Approaches Review

Paper ID V7I2-1255 · Pages 226-232 · Electronics And Communication Engineering

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Agricultural productivity is something on which the economy highly depends. This is one of the reasons that disease detection in plants plays a vital role in the agriculture field, as having disease in plants is quite natural. If proper care is not taken in this area, then it causes severe effects on plants and due to which respective product quality, quantity, or productivity is affected. In this proposed approach optimized segmentation to find active area for features and reduce noise, then extract texture base features and learning by ensemble classifier approach. In Proposed framework main emphasis on getting sufficient features from disease and learning combination of classifier use linear and nonlinear classification function.

Keywords: Image Processing, Image Segmentation, K-Mean Clustering, Feature Extraction

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39 Analysis of operations research applications in agricultural research: A literature review

Paper ID V7I2-1219 · Pages 233-237 · Operations Research

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Agriculture is a productive process requiring the transformation of a set of productive inputs into output with the aim of satisfying wants. These inputs are limited and as such place a constraint in the transformational process. It, therefore, implies that decision-making on the allocation of these limited agricultural resources is a major area of concern in attaining the objectives of agricultural production. Operations research, an analytical

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method used in problem-solving and decision-making in organizations, have been applied for over 70 decades in decision-making in agriculture. A review of applications of Operations research by some researchers in agriculture problems at farm level, regional sector level, environment protection, risks, and uncertainty analysis, formulating livestock rations and feedstuffs, forestry management, etc., shows that its application in agriculture is extensive and its potential for development is limitless. The application is constrained by complex interacting drivers existing in productivity, markets, the environment, and the people. These drivers include accuracy of data, quantifiability of data. natural disasters, instability of prices, demand for products, changes in government subsidies and policies, and dependence on an electronic computer. In conclusion, the decision to implement the results from Operations research lies with human beings and so this human element is still the most significant part of the decision-making process. The changes and adjustments in the natural and economic environment, and new improved information in the subject area, must be incorporated in the mathematical models and their parameters to account for the change.

Keywords: Operations Research, Agricultural Research, Decision-Making

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40 Improved plant leaf disease classification by optimizing weight with convolution neural network learning approach

Paper ID V7I2-1265 · Pages 238-242 · Electronics And Communication Engineering

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Agricultural productivity is something on which the economy highly depends. This is one of the reasons that disease detection in plants plays a vital role in the agriculture field, as having the disease in plants is quite natural. If proper care is not taken in this area, then it causes severe effects on plants and due to which respective product quality, quantity, or productivity is affected. In synopsis proposed approach optimized segmentation to find an active area for features and reduce noise, then extract texture base features and learning by ensemble classifier approach. In the Proposed framework main emphasis on getting sufficient features from disease and learning a combination of Convolution and nonlinear classification function.

Keywords: Image Processing, Image Segmentation, K-Mean Clustering, Feature Extraction, CNN

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41 Delineating the psychological impact of COVID-19 on small businesses in India

Paper ID V7I2-1269 · Pages 243-247 · Organizational Psychology

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The covid-19 pandemic has caused large-scale loss of life and economy across all sectors. It has psychologically

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and socially impacted the general population ranging from their health and well-being to their education, career, and businesses. It has impacted the global economy drastically. India saw its worst recorded decline in economic growth since 1996 during the pandemic. In India, most of more than 100 million people engaged in small businesses were laid off and about one-third of the small businesses went beyond the scope of rescuing during the pandemic. In such a scenario, this paper intends to delineate the psychological impact of the pandemic on small businesses in India which faced a significant economic blow. At the same time, the resilience of some small businesses that managed to cope and thrive during these difficult times have been briefly discussed.

Keywords: Small Businesses, Covid-19, Psychological Impact, Stress, Mental Health

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42 Online based Aadhar notification system

Paper ID V7I2-1218 · Pages 248-251 · Computer Science

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The Indian voter ID card is an Identity document is issued by the Election Commission of India to adult domiciles of India, who have reached the age of 18, which primarily serves as an identity proof for Indian citizen while casting their ballot in the country’s municipal, state and national elections. So, voter id is an important need for everyone. Our paper is going to represent the notification of a Voter id and will give the link for registration based on an aadhar card. Moreover, such notification will be sent for applying for Employment registration, License for Vehicle, Passport, and Pan Card like each and everything will be notified to apply to every citizen through their email id. Every important document and identification card need to be with every citizen so that every person can get all the needs.

Keywords: Voter Id, Aadhar Card, Employment Registration, Government Scholarship

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43 Reuse of greywater in residential buildings

Paper ID V7I2-1277 · Pages 252-255 · Residential Buildings

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The issue of greywater management which is defined as all sources of domestic wastewater excluding toilet wastewater is gaining more and more importance, especially in developing countries where improper wastewater management is one of the most important causes for environmental pollution and fatal diseases. The main problem for suitable greywater management systems on the residence level is the lack of knowledge and experience in that field, especially in developing countries. The report presents typical greywater characteristics, the main treatment systems applied around the world, and existing regulations for greywater treatment and reuse. Case studies are presented where greywater treatment systems are successfully applied.

Keywords: Grey Water, Reuse of Grey Water, Low-Cost Technology

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44 Review on Hepatitis C

Paper ID V7I2-1279 · Pages 256-266 · Biotechnology

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A blood-borne virus causes hepatitis C. The epidemic has a strong global influence on the health, epidemiology, and economy. In 60 percent to 80 percent of cases hepatitis C virus (HCV) infections can become chronic, and can be serious, such as liver cirrhosis and primary hepatitis carcinoma. In Germany, it is estimated that there are about 400,000 to 500,000 people who are chronically infected. Since 1990, compulsory blood and plasma donation monitoring has significantly decreased and is extremely low, the risk of viral transmission through blood products. However, the injecting of opioid consumers is a significant risk group. In recent years, opioid treatment efficacy has dramatically increased for chronic infection of the hepatitis C virus. In 50% to 75% of patients according to HCV genotype, continuous viral clearance is achieved. A large percentage of the global population is estimated to have a chronic virus infection. The virus has major heterogeneity, which interferes directly with the management of diseases. Therapy reaction depends on the genotype and subtype of HCV. Continuous variant generation (quassis) helps the virus to avoid antiviral regulation. In the past, the only treatment choice of the condition was a mixture of ribavirin and interferon therapy. Several alternative medical options are now being established and are available to a substantial portion of the population affected. Moreover, the hunt for novel anti-HCV substances begins, predicting potential therapeutic changes. The mutation ability of the virus and other factors affecting therapeutic outcomes should be considered by researchers.

Keywords: Hepatitis, HCV Virus

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45 Indian new agricultural acts -2020 and minimum support prices (MSP) of agricultural commodities

Paper ID V7I2-1278 · Pages 267-271 · Agricultural Act

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In September 2020, the Government of India passed three new agricultural laws to promote agricultural development by making changes between agricultural production and agricultural marketing. The present paper attempts to study the impact of new agricultural acts on the agricultural production and marketing system. The research is aimed at understanding the nature of agricultural acts, analyzing the minimum support price under agricultural acts, and the opposition of farmers' organizations to the acts. The research presented is based on the second source of data. Research has shown that the main opposition of farmers to this law is in terms of minimum support prices of agricultural commodities. Profit attitude will increase after private companies enter agricultural marketing. Companies will gain control of the agricultural market in order to make a profit through a monopoly. Farmers fear that this action will hurt them. Research recommends that the new agricultural law provides for a minimum support price. The laws should include a provision for the government to intervene if any irregularities are found in agricultural marketing.

Keywords: Contract Farming, Essential Commodities, Minimum Support Price, Agricultural Price Policy, Agricultural Market Committee

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46 Extraction of flood hydrographs for a hilly terrain region using open source spatial data and meteorological parameters using hydrological modeling – A case study with HEC-HMS

Paper ID V7I2-1280 · Pages 272-280 · Civil Engineering (water Resources)

Kamuju Narasayya, Central Water and Power Research Station, Pune, Maharashtra

To estimate the Rainfall-Runoff process popularly used watershed model is Hydrologic Engineering Centers–Hydrologic Modeling System (HEC-HMS), which is generally used to estimate the basin's hydrological phenomenon caused due to precipitation. It helps to predict the various hydrologic responses to watershed management and to have the best understanding of the effect of these practices. It is specific from the spacious study of the literature that the studies on relative assessment for hydrologic simulations are finite in developing countries including India. This case study dealt with hydrological modeling software of HEC-HMS is used to simulate the Rainfall-Runoff process to derive hydrograph at the outlet of 'Karcham' catchment, Himachal Pradesh, India. In this study, the SCS curve number method is applied to determine the loss model as a major component in Rainfall-Runoff modeling. To enumerate runoff volume, peak runoff rate, and flow routing methods SCS-Curve Number, SCS-Unit Hydrograph, and Muskingum routing methods are chosen respectively. The simulated peak flood hydrograph obtained with open source spatial and meteorological data at the outlet of 'karcham' watershed was 5663.6 m3/s. The predicted discharge is lesser than 1.4% of the simulated discharge. The results of the present study indicate that HEC-HMS is a tool applied to derive flood hydrographs with open source spatial and non-spatial data in absence of virtual data to achieve the various objectives.

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Keywords: Hydrograph, Runoff, Meteorological Model, Peak Discharge, Open Source Data

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47 A conceptual framework for an integrated short-term course on health communication skills (HCS) in the undergraduate nursing programme.

Paper ID V7I2-1284 · Pages 281-284 · Nursing

Leena Lourdu Swamy, Professor, Bangalore Baptist Hospital, Bengaluru, Karnataka

This article describes and discusses the conceptual framework developed to emphasize the need for a short-term course on Health communication skills(HSC) for the undergraduate nursing program. The study has adopted mixed methods both qualitative and quantitative approach to critically analyze the factors that influence ineffective communication skills among nurses and the implementation of a health communications skills training hence the conceptual framework depicts both the qualitative conceptual model and Lewin's theory (adopted) for quantitative approach. The qualitative conceptual theory describes the factors contributing to ineffective communication and the consequences of it while they need to implement an HSC course as described in Lewin's conceptual model. The limitations of the current nursing curriculum in India on health communication skills are elaborated and the demand for an HSC course is recommended.

Keywords: Conceptual Framework, Qualitative Approach, Quantitative Approach, Health Communication Skills, Short Term Course and Undergraduate Nursing Programme

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48 Strengthening of reinforced concrete beam with polyester resin bonded basalt fiber fabric

Paper ID V7I2-1272 · Pages 285-289 · Structural Engineering

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Basalt fiber with polyester resin usage for increasing the concrete beam structural behavior.

Keywords: Reinforced concrete beam, Basalt fibre fabric, Polyester resin

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49 Detection and prevention of phishing websites using web crawlers

Paper ID V7I2-1201 · Pages 290-292 · Computer Networking

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ABSTRACT-Phishing attack is the simplest way to obtain sensitivity information from innocent users. The aim of the phishers is to acquire critical data like user name, password and bank account details. The proposed

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system mainly focuses on detecting and preventing the phishing websites. A Web crawler is used to detect the websites. Detected phishing sites are added to the black list. The black list contains only fake websites. Web Crawling focuses on obtaining the links of the web page. Usually, a phishing website can be easily identified by its URL by its HTML code. Here the check website page makes users to be aware of phishing website and avoid users to become victim of such attacks. This software is very helpful for users to identify and prevent the phishing websites. For this purpose, we are developing a phishing website detection system.

Keywords: Phishing, Web-crawlers, Phishing Attack

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50 Effects of chalk dust on teacher

Paper ID V7I2-1288 · Pages 293-294 · Environmental Science

Lokhande Rohan Shivling, Research Scholar, Karmayogi Polytechnic College, Shelve, Maharashtra

The aim of the study is the effect of chalk dust on Teachers Health. Atmospheric pollutants like dust particles, poisonous gases cause air pollution and it affects adversely human health and creates irritation to the nose and throat, an annoyance to human eyes. Also creates other ill effects like headache, allergies, nausea, and similar effects. Chalkdust particles are one of the major problems in schools and colleges. at the time of teaching some chalk, dust particles enter into our body through inhalation process and suffer from diseases like asthma, burning eyes, conjunctivitis, and allergic respiratory or nasal diseases. Control Group ¬–Healthy Controls -100 subjects. Normal healthy age-matched males and females subject(not exposed to any occupational dust) male and female teachers-100 were considered as the subject of this study (exposed to chalk dust particles with work experience 5-30 years) Information was collected by visiting the each teacher. The study subject was interviewed and a questionnaire was filled for each subject, which included details about their age, educational qualification, and health problems such as nausea, headache, irritation, and dryness of throat, weakness, sneezing faced by them. The present study indicates that Teachers faces numerous health problems due to direct inhalation of chalk dust such as asthma, burning eyes conjunctivitis, and allergic respiratory or nasal diseases

Keywords: Chalk Dust, Health Effects on Teachers

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51 Sensitivity analysis of water footprint in paddy

Paper ID V7I2-1290 · Pages 295-300 · Agricultural Engineering

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Water is an incredibly important aspect of our daily lives. Water footprint assessment is a fast-growing field of research, but as yet little attention has been paid to the uncertainties involved. The study investigates the sensitivity analysis of water footprint conducted in Samrakalwana village near Allahabad, UP, India. Water

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footprint was calculated for the Paddy crop and factors that influence the water footprint are identified. Sensitivity analysis was done for the parameters influencing water footprint with the One-at-a-time method (OAT), for parameters like reference evapotranspiration (ET0), Crop Coefficients (Kc), Precipitation (PR), Crop planting date, Field capacity of soil moisture (Smax), and Yield(Y). The results show that the water footprint of Paddy is 3384.701l/kg. The parameters like ETo, Kc, PR, and Smax are changed within the range of ±90%, and Crop Planting Date changes within the range of ±30%, and yield is changed within the range of ±50%. The water footprint is most sensitive in ET0, Kc, PR followed by yield. Sensitivity Index Parameters have calculated and for increasing the yield of the Paddy crop certain recommendations have been explained.

Keywords: Water Footprint, Sensitivity Analysis, Crop Water Use, Yield

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52 Effectiveness of study skills on academic performance among nursing students

Paper ID V7I2-1276 · Pages 301-308 · Nursing

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Study habits are the most important predictor of academic performance and global research has revealed that study habits affect academic performance. In this regard, Nursing students are faced with a large amount of information that is difficult to organize and learn, which requires not only knowledge but also the application of study skills. The main objective of the study was to evaluate the effectiveness of study skills on academic performance among nursing students. A pre-experimental research approach, group pre-test, and post-test research design were adopted. The data was collected from 78 students of I year B.Sc Nursing (2019 batch) of PSG College of Nursing, Coimbatore. The tool comprised of Demographic variables, VARK Questionnaire (version 7.8), and Study skills questionnaire. Assessment of Learning styles indicates that in total, 58 students (76%) preferred only one learning style (single modal), and 18 students preferred to use multiple learning styles (multimodal). The statistical student's test was computed between pre-test and post-test mean scores of Academic performance. The calculated was 35.93, which was greater than the tabulated value (3.195) at p

Keywords: Study Skills, Learning Styles, Study Habits, Academic Performance

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53 Effect of neem treatment on the total sugar content of mango midge fly

Paper ID V7I2-1225 · Pages 309-314 · Life Science

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Neem was proved to be an eco-friendly & best insecticide. Neem components show multiple effects against different insects. In the present work, neem leaves were used for the gall treatment. The total sugar content of mango midge larvae was determined in this investigation. After 24hrs of treatment larval sugar was found to be decreased significantly (p>0.01). After 48hrs and 72hrs, it showed a moderately significant (p>0.05) decrease. After 72hrs,7days, and 15 days this decrease was more significant (0.001).

Keywords: Azaditachtin, mango leaf galls, Midge fly

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54 Trends and application in data mining

Paper ID V7I2-1295 · Pages 315-325 · Computer Science

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In our day to day life, many Terabytes of data are generated by various organizations around the world, as data has been increasing each day in Tremendous amount there is a need for some tools and techniques which may be used and hence help humans to analyze large data repositories and gain some useful information. This need which keeps on increasing on daily basis gives rise to an area known as Data Mining or Knowledge Discovery of Databases. The main aim of Data Mining is to extract some useful unknown patterns or knowledge or information from the vast amount of data repositories. In this automated world, many organization uses Data Mining as it enhances various fields of human life including education, agriculture, business, etc. using Artificial Intelligence, Machine Learning, Pattern Recognition, and various data visualization techniques. This paper discusses and describes Data Mining and how data mining is performed for Retail Industries, the paper also describes how data mining can be used for Fraud Detection.

Keywords: Data Mining, Trends in Data Mining, DM, Data Warehouse, Application in DM

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55 Law of maintenance under hindu law

Paper ID V7I2-1287 · Pages 326-328 · Law

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This paper deals with the Maintenance of wife under the Hindu Marriage Act. The concept of maintenance aims at putting the wife back in the same position of comfort and lifestyle as she was at the time when her marriage existed. There is no fixed amount of maintenance that the husband is liable to pay to his wife, and it's upon the discretion of a family court to fix the amount of maintenance that the husband needs to pay either on a monthly basis or in form of a lump sum. Maintenance to wife is a very complicated issue under Hindu Marriage

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Act. It is often stated as a means to exploit the husband by asking alimony for life. Section 24 of the Hindu Marriage Act, 1955 (the Act) states that either husband or wife may claim maintenance pendent lite i.e. maintenance till the proceedings are in process. Further, section 25 of the Act states the grounds permanent alimony. Maintenance to wife refers to the payments, which a husband, under certain circumstances is under an obligation to pay. The obligation of payment of maintenance can either during the subsistence of the marriage or after the dissolution of the marriage. The most important aspect of maintenance has no independent source of income to support himself/herself. The quantum of maintenance and the expenses of the proceedings have not been specified in any of the Indian Matrimonial statuses except the Divorce Act.

Keywords: Maintenance, Alimony, Spouse, Grounds, Discretion

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56 Can an automated vitals kiosk machine deliver quality vital measurement?

Paper ID V7I2-1296 · Pages 329-332 · Healthcare

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Vital signs monitoring is an important first step in the early detection of the clinical conditions of patients in a hospital OPD setting. In all hospitals, the vital measurements are recorded by trained staff nurses in OPD before a doctor consult. A Nurse is a very valuable and scarce resource in a hospital setting and repetitive mechanical tasks like measuring vitals need not be done by a nurse in an OPD and can be automated using a kiosk so that nurses can be redeployed for clinical care. India Health Link (IHL) self-service kiosks can measure parameters like Blood Pressure (BP), Body Mass Composition (BMC), Height, Weight, Body Mass Index (BMI), Electrocardiogram (ECG), Pulse rate, Oxygen saturation (O2), Body Temperature and a 6 lead ECG – All basic parameters which are required pre doctor consult. If placed and used in a hospital setup, it could potentially reduce the time to doctor for all patients, since they need not wait for vitals reading by a dedicated medical professional. It could also help prioritize which patients may require the immediate attention of the doctor and whether the patient is to be treated in an emergency or can be redirected to OPD. It could also be advantageous if installed in public hospitals making it accessible to a large number of people, thus reducing the time to doctor by highlighting any abnormalities in vitals readings – and making the user aware of the same

Keywords: Healthcare, Automated Vitals Measurement, Technology, Kiosk, Quality

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57 Does Meat Consumption Affect the Environment?

Paper ID V7I2-1257 · Pages 333-334 · General

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One day while I was eating at a restaurant that offers both vegetarian and non-vegetarian cuisine. When I was

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leaving, I saw that all the waste meat was being discarded not in a garbage can but was just dumped onto a pile of waste. This inspired me to find out if meat consumption affects the environment. My main aim by researching and writing a report on it is to educate people on the causes, consequences of consumption of meat and what can be done to reduce its effects on the environment. Production of meat has huge environmental effects – increasing greenhouse gas discharges, usage of pastoral land and consumption of huge volumes of freshwater that are required to grow feed crops, provide animals with drinking water and clean filthy factory farms. Meat consumption also escalates the chances of long-lasting diseases along with disturbing biodiversity. Moreover, the emission of methane gas from cattle adds stress to the environment leading to global warming. Research indicates that people living in the USA, Australia and other countries rely strongly on diets containing meat, and not many actions have been taken by their governments to overcome the issue. On the other hand, the government of countries like Israel, encourage their people to follow a vegan diet to reduce the effects of meat consumption on the environment. Nationally and globally, awareness about the outcomes of meat intake on healthiness and ecosystem and the positive impact of a vegan diet can be widely spread through posters and campaigns. After researching this issue, I can now deeply understand the impacts of human dietary choices on the environment, public health, animal extinction and imbalance in ecosystems nationally and globally.

Keywords: Meat consumption, Environment, Health

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58 Are health problems leading to Economic loss in various countries?

Paper ID V7I2-1256 · Pages 335-336 · General

Shah Jay Siddharth, Student, Utpal Shanghvi Global School, Mumbai, Maharashtra

Yes! Healthcare does result in economic loss. If the health issues are snubbed in their early stages, curbing them is next to impossible. We have seen the onslaught of COVID- 19. Since timely measures weren't taken throughout the globe, everyone had to undergo a lockdown, thanks to late action. Lockdown is nothing but economic loss from the monetary aspect. Poverty results in ignorance of a disease which results in its meteoric spread. At this level, a locality may visit a doctor resulting in personal economic loss. The disease, if neglected at this stage, may spread in numerous states increasing the need of many hospitals for the government, more equipment and doctors. Furthermore, many people will not visit their workplace leading to more economic loss. Inter-state and international travel will transmit the diseases to many more countries and states. So, more hospitals, doctors and healthcare facilities would have to imported. During the later stage, Tourism, Entertainment and Transportation industry will suffer a huge setback thanks to unprecedented disease spread. The government will have to set up free aid for the poor, the core of the pandemic. At the national and global level, the result is more expenditure than income leading to national and international recession. The need is to reform and strengthen the medical sector and its economic allocation. To convert it from a 'late bloomer' to a quick solver of diseases. There is also a requisition to educate the poorer public. So that, we can heal the world- make it a better place, for you and for me and the entire human race.

Keywords: Health care, Economic loss, Pollution, Diseases

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59 How do natural disasters affect countries worldwide?

Paper ID V7I2-1261 · Pages 337-338 · General

Malhotra Daksh Varun, Student, Utpal Shanghvi Global School, Mumbai, Maharashtra

My Global Perspective report documents the cataclysmic impacts that natural disasters can pose to humans, the ubiquitous ramifications on the local/global economy, and how it is imperative for governments across the world to devise strategies to mitigate the effects of these catastrophic events. It also shows that the distress and annihilation is phenomenal, whether they are developed nations or poverty stricken, whilst also highlighting the fact that many of these catastrophes are augmented by mismanagement and urbanization. To conclude, the research helped me expand my outlook from the constricted understanding of only the Indian subcontinent to a global scale.

Keywords: Natural Disasters, Global Effect, National perspective

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60 Does the use of smart phone affect other businesses?

Paper ID V7I2-1260 · Pages 339-340 · General

Gomes Joshua Joseph, Student, Utpal Shanghvi Global School, Mumbai, Maharashtra

The following report details the impact of smart phones on the Indian, American and Chinese economies with a brief look on the global scale impact. It examines how smart phones have led to technical developments, fluctuating employment and global connections created through the use of these devices.

Keywords: Smart phones, Usage, Health

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61 Does gender discrimination in textbooks impact the holistic development of girls?

Paper ID V7I2-1259 · Pages 341-343 · General

Bhargava Ishi Harsh, Student, Utpal Shanghvi Global School, Mumbai, Maharashtra

This report contains information on how textbooks are plagued by gender discrimination. It talks about the effect of these prejudices on different countries based on their levels of development, and how their ignorance towards changing gender roles affects the growth of the younger generations

Keywords: Gender Discrimination, Holistic Development, Textbooks

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62 Does having a low self-esteem affect people across the globe?

Paper ID V7I2-1258 · Pages 344-345 · General

Santwan Keisha Sheldon, Student, Utpal Shanghvi Global School, Mumbai, Maharashtra

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Am I worth it? All doubts, insecurities and complexes that are related to our self-esteem culminate in this question, in every individual's mind, at some point or the other, some more than others. This competitive world nudges several to evaluate their self-worth, hence this research aims to highlight the global malaise of drastic consequences of low esteem in individuals. This report also pans out the various causes for the same, and an attempt has been made to suggest certain broad corrective measures to this end. To know more about self-esteem and how to combat the same, read on.

Keywords: Self-esteem, Effects, Confidence

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63 Review on renewable energy resources power controller by MPPT and AI approaches

Paper ID V7I2-1302 · Pages 346-350 · Green Electricity

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Due to substantial generation and demand fluctuations in standalone green electricity control schemes are becoming crucial for the electricity sharing and voltage regulation functions. The classical power management strategies rent the maximum energy factor monitoring (MPPT) algorithms and rely on batteries in case of possible extra or deficit of strength. However, so as to recognize the constant present day-constant voltage (IU) charging regime and growth of the life span of batteries, electricity control strategies require being more flexible with the power curtailment feature. The paper proposes a method for the hybrid solar photovoltaic and winds energy device in Battery management for stand-alone applications. Battery charging manner is non-linear, time-varying with an enormous time delay so it is difficult to achieve the best energy management performance by using traditional control approaches.

Keywords: Substantial Generation, Maximum Energy Factor Monitoring, Wind Energy, Renewable Energy

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64 Study on investors perception towards mutual funds

Paper ID V7I2-1307 · Pages 351-354 · Finance

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The aim of the study is that to know the investor's perception of mutual funds. It aims at understanding the perception of the investors who invest in mutual funds as not everyone is familiar with mutual funds but still they invest in it to get returns. This study contains a sample of 140 different kinds of investors and their diversification of investment plans. The data was collected from the investors through circulated questionnaires in Hyderabad city and surrounded by rural and urban areas. By this study found that most of the investors have a positive impact and good knowledge of mutual funds. Based on the findings and analysis it concluded that most of the investors are satisfied with the returns and performance of mutual funds. Also found that tax benefits, diversification, and reduction in risk as more impact on the investor's perception of investing inmutual funds.

Keywords: Mutual Fund, Investors, Risk, Perception, and Return

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65 Gadgets and gamification digital devices from SMS to SHS (Smart Health Solutions)- The app revolution

Paper ID V7I2-1299 · Pages 355-365 · Management Health And Wellness

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In the wake of the worldwide phenomenon of technology overtaking every aspect of our lives and the huge surge in the overall usage and application of technology in everyday life. There are two facets that have emerged as striking features in the global tapestry of social media and techno-connected societies and communities across the world. Number one is the total re-haul in the way people work and live, which can be termed as ‘Lifestyle’ in the broader sense. The second is the invasion of technology into every aspect of that life, as smart devices, gaming consoles, Applications, and special Apps and gadgets have bombarded us from every direction. Looking at it from various perspectives gives a wide spectrum of viewpoints and each has its own merits and demerits, yet the most important and striking feature has to be the impact of the digital era on health. And that’s the viewpoint that is more pressing and urgent in the current global context. The upside and downside of the Digitalization of every aspect of life as a direct result has triggered both a socio-economic upheaval and a global health crisis simultaneously. The Upside being digitalization of almost everything around us and the ease and simplified solutions which comes at the touch of a button, we can call it digital empowerment, the downside being Sedentary lifestyle-induced debilitating epidemics of obesity, Diabetes, Cardiovascular diseases, and many physiological and psychological problems for people across profiles and ages. However, there is a major awakening to the crises, and many Governments, companies, communities, and people have realized the value of a healthy lifestyle and responded with a dramatic sense of responsibility and commitment towards healthier choices and interestingly enough, fitness is the latest priced possession and status symbol. But far from being an elitist phenomenon, it is fast becoming a pop culture and at least in that spirit has become a major calling for people across the spectrum to get fitter. Again, technology in the form of smartphones, wearables, gadgets, and intelligent devices is at the forefront of this paradigm. The question though, with regard to the efficacy and effectiveness of the devices and solutions and the innumerable wearables, Apps, and technologies that are available in various forms and formats is still at large and their role as a definitive solution for health and fitness requirements is a work in progress, which, unless it involves the

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right blend of the expertise, experience, and education, cannot become an empowering tool. We need to find the right ones that will enable us to use the available technology without overwhelming us and fit within the scheme of specific requirements and aspects that we seek feedback and inputs for and thereby enhance the effectiveness and amplify the experience.

Keywords: Artificial Intelligence, Analytics, Connectivity Connected, Digital Devices, Diagnostic Tools, Enabled /Embedded /Empowered Solutions, Electronic Ecosystem, Fitness Quotient, Gadgets and Gamification, Health Care Solutions/Health Drive, Wellness Quotient

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66 Ant colony optimized MPPT with single CUK converter for standalone PV system

Paper ID V7I2-1233 · Pages 366-368 · Electrical And Electronics Engineering

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The practical realization of solar-based standalone power system with maximum power point tracker (MPPT) to produce electrical power in rural places (residential applications). The solar-inspired Ant Colony Optimization (ACO) based MPPT algorithm is employed for the purpose of fast and accurate tracking power from solar sources. Peripheral Interface Controller (PIC) controlling strategy is adopted in this presented work compared to classical PI control. Moreover, a single Cuk converter is operated as an impedance power adapter to execute MPPT functioning. Satisfactory practical results have been realized using the platform that justifies the superiority of proposed algorithms designed under various operating situations. Results show that the converter exhibits good performance in steady-state and during the load change.

Keywords: Ant Colony Optimization, MPPT, CUK Converter, PIC Controller

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67 To improve the comfort to the tractor operator by using gravity tractor seat frame

Paper ID V7I2-1316 · Pages 369-373 · Mechanical Engineering

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The tractor is the major machine used in agriculture aspects for various purposes. The operator wants more comfort while operating in various situations. Generally, due to sudden shocks and vibrations, effects in various parts of an operator. A large number of studies have been conducted and researchers have suggested several criteria for evaluating discomfort and the suitability of a tractor seat in a given working condition. The studies have led to various parameters, viz. the body pressure distributed under and supporting both the buttocks,

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thighs, and the back of an operator, control of posture in static or dynamic condition, ride vibration, exposure time on task, and other factors. But in the absence of a more definitive and the most logical criteria particularly from the biomechanical viewpoint, the researchers will continue to design conditions and procedures to understand the seat dynamics and evaluate the seating discomfort. By introducing a sliding mechanism in a curved frame by using roller bearings the sudden shocks and vibrations are absorbed by this mechanism and it enhances the feeling of comfort, safety, convenience, and results in higher work output from the operator. Therefore, this paper reviews the research and development information available in this regard and attempts to set the most appropriate procedure for assessment of seating discomfort during tractor drivin

Keywords: Agriculture Tractor, Seat Suspension, Vibration Reduction, Control System, Comfort

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68 A study on material handling and customer satisfaction

Paper ID V7I2-1318 · Pages 374-377 · Operations

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Materials handling is the science and the art of including the moving, packaging, and storing away of substance in any structure, and incorporates the arrangement, setting, and situating the material to manage their development process. The Present Study is focused on material handling both in Packaging as well as storage. It was studied regarding Meythoma international. The goal of the study is to discover the difficulties faced in material handling, it likewise assesses the effect of changes in material handling of the executives by implementing some logistics methodologies. Whether it meets the security of service, cost of service finally whether it meets client requirements. The Questionnaire was given to the employees of Meythoma International to discover the difficulties they looked at in material Handling. From the response, we can observe that some answer for tackle the difficulties, and we propose a technique to service, dependability and decrease the cost and overall to meet consumer satisfaction level.

Keywords: Material Handling, Customers, Satisfaction, Training, MHE Selection, Material Handling Equipment

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69 Evaluation of advertisement and publicity scheme in the north-eastern region of India

Paper ID V7I2-1322 · Pages 378-384 · Public Policy

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The North-Eastern (NE) region of India has been neglected till recently. It has not only been ignored from the development perspective but also finds minimal space in the academic arena. This paper will contribute to filling this void. It will highlight the lacunas as well as the silver lining while evaluating one of the crucial schemes, the Advertisement and Publicity Scheme in the NE States. The objectives of the paper are to examine the structure and efficiency of the scheme and to assess the performance of the scheme which aims to promote peace and counter the perceived feelings of alienation, insurgency, infiltration, and militancy in the NE

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States. The study has used qualitative and quantitative methods and tools for collecting primary and secondary data; a sample size of 200 beneficiaries have been taken, 25 beneficiaries each from the eight states of North East namely, Arunachal Pradesh, Assam, Mizoram, Manipur, Meghalaya, Nagaland, Sikkim, and Tripura. It provides a detailed analysis of budget allocation, stakeholders, and the responses of beneficiaries. It answers the question of whether the scheme has effectively achieved its desired goals or not?

Keywords: Advertisement And Publicity, Scheme, Evaluation, North Eastern Region, Peace Promotion, India

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70 Solar power monitoring system using internet of things

Paper ID V7I2-1231 · Pages 385-387 · Electrical And Electronics Engineering

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This paper is implemented based on a new cost-effective methodology using IoT for remotely monitoring solar panel parameters. This will facilitate real-time monitoring. A network using Wi-Fi technology can transmit the information. The use of sensors collaborated with the internet can make solar panel monitoring systems less complex, less time-consuming, and flexible. As this system keeps continues to monitor solar power plants, the daily, weekly, and monthly analysis become easy and efficient also with the help of this analysis it is possible to find the generated power data of solar power plant. This massive scale of solar panel deployment requires sophisticated systems for automation of the panel monitoring remotely using web-based interfaces as the majority of them are installed in inaccessible locations and thus unable to be monitored from a dedicated location.

Keywords: Solar panel, IoT, Sensors, Monitoring

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71 Plagiarism: An academic crime

Paper ID V7I2-1308 · Pages 388-392 · Library & Information Science

Atin Nandi, Deputy Librarian, IIT Kharagpur Central Library, Kharagpur, West Bengal

Plagiarism in academics has become a growing problem throughout the world. The paper aims to discuss with an overview of plagiarism. The author also highlights various other issues namely academic offenses, UGC guidelines, preventive measures, standardize policies to safeguard students – from the point of view of plagiarism. The author also throws light on the emerging role of librarians in order to protect students from committing plagiarism.

Keywords: Cyber Plagiarism, Citation Styles, Fishbone Diagram

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72 Note booker pro case study

Paper ID V7I2-1309 · Pages 393-402 · Data Science

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The main idea of the software named, “Note booker Pro” is to make the task of preparing a data science notebook, super easy and fast. With this software, any person can quickly get insights about a data set displayed in front of him. This software also provides effective visualization facilities with 6 types of commonly used graphs. Anyone can also compare through 30 different Machine Learning models of both regression and classification types to choose the best model that can provide the highest accuracy for a data set of a given size and split ratio, (which can also be set by the user as per his/her requirements).

Keywords: Data Analysis, Machine Learning, Data Visualization, Model Building, Web Application, Data Science Notebooks, Education, Speed of Development

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73 Scientific social responsibility – A systematic literature review

Paper ID V7I2-1335 · Pages 403-413 · General Management

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Scientific Social Responsibility (SSR) concerns the development of synergies between all players of our scientific knowledge community, as well as the creation of ties between science and society. The contribution of SSR compared to corporate social responsibility (CSR) is minimal at present and not well documented in the literature. The purpose of this paper is to present a systematic literature review of SSR. The components were identified through a detailed study of literature from the year 1947 to 2019 from various fields in order to evaluate SSR. The scope of this paper is to provide a broad overview and clarity on the topic of SSR. The paper also exclaims the draft policy implemented by India and how it aids in the betterment of society.

Keywords: Scientific Social Responsibility (SSR), Scientific Community, Corporate Social Responsibility (CSR), Draft Policy, Higher Education Institutions (HEI’s).

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74 Significance of improving communication skills

Paper ID V7I2-1321 · Pages 414-416 · Language

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The term ‘communication’ has got its own importance in the current scenario. In the present age of information and communication technology (ICT), it has become essential for every individual to possess and master communication skills. The present research article aims at understanding the significance of communication skills and it also discusses some important ways to improve these skills. When we speak of communication, we

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normally think about the day-to-day tasks and discussions we all engage in. As Peter Ustinov says, “Communication is the act of simply being understood”. One of the basic aims of communication is to convey our thoughts and ideas and make the people understand these ideas. Hence, there is an urgent need of improving communication skills to present one’s thoughts and ideas effectively.

Keywords: Communication, Listening, Skills, Message, Speaker, Receiver

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75 Plant disease detection using ensemble learning – A review

Paper ID V7I2-1300 · Pages 417-420 · Computer Science And Engineering

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Agriculture is one of the strongest pillars of the Indian economy. Plants are important as they are the source of energy supply to mankind. Approximately 70% of the Indian economy depends on agriculture for their livelihood. But this is affected by the disease which causes lower agricultural productivity. The farmers encounter difficulties in their detection of plant diseases. Diseases can affect the plant at the time of sowing and harvesting and it leads to low productivity and lowers the economic level. So, there is a need to mitigate this issue by computer techniques and machine learning methods. This paper presents an overview of various classification techniques in machine learning that helps in plant disease detection. The emergence of agriculture is one of the strongest pillars in the Indian economy. Plants are important as they are the source of energy supply to mankind. Approximately 70% of the Indian economy depends on agriculture for their livelihood. But this is affected by a disease that causes lower agriculture productivity. The farmers encounter difficulties in their detection of plant diseases. Diseases can affect the plant at the time of sowing and harvesting and it leads to low productivity and lowers the economic level. So, there is a need to mitigate this issue by computer techniques and machine learning methods. This paper presents an overview of various classification techniques in machine learning that helps in plant disease detection. The emergence of accurate techniques leads to impressive results. accurate techniques lead to impressive results.

Keywords: SVM, KNN, Decision Tree, Random Forest

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76 Design and analysis of an In-Pipe Inspection Robot

Paper ID V7I2-1341 · Pages 421-425 · Mechanical Engineering

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Previously there are various designs available regarding of an in-pipe inspection robot. This research paper aims at preparing a new design along with its Analysis. In a beginning we studied the available designs and Analysis reports. We have used SOLIDWORKS to design and Analysis of our robot. Our model is a wireless in-

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pipe inspection robot which is efficient to pass through a pipe with diameter in range of 170-200mm. The important areas we have considered while in the process of design are strength, safety while performing task, steer ability, and the most important one is size and shape adjustability We can detect various defects such as cracks, corrosion, blockages, material decay, flaws etc.

Keywords: In-Pipe Inspection, Strength, Shape Adjustability, Wireless, Design, Analysis

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77 COVID 19 detection using chest X-rays

Paper ID V7I2-1340 · Pages 426-429 · Computer Science

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The COVID-19 epidemic is causing a major outbreak in more than 150 countries worldwide, which has a profound impact on the health and well-being of many people worldwide. One of the most important steps in combating COVID-19 is the ability to detect infected patients early, and place them under special care. Diagnosis of radiography and radiology is probably one of the fastest ways to diagnose patients. To accelerate the detection of COVID-19 infections by X-ray images, this study developed a new diagnostic platform using a convolution neural network (CNN) that can assist radiologists with diagnostic detection of COVID-19 pneumonia. Such a tool can save time in translating chest X-rays and increase accuracy and thus improve our medical capacity to detect and diagnose COVID-19. The idea of the study is that a collection of X-ray medical imaging images are used to train CNN which can distinguish between sound and useful information and then use this training to interpret new images by detecting patterns that show certain diseases such as corona infection in individual images. Continue to use transfer learning strategies such as VGG 16, RESNET50, Inception V3 and find out which process provides the best accuracy in obtaining COVID-19.

Keywords: Corona Virus, COVID-19, CNN, Transfer Learning Models, Chest X-ray Analysis, VGG16, RESNET50, InceptionV3

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78 A study on investment pattern and preference of retail investors

Paper ID V7I2-1325 · Pages 430-433 · Finance

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Investment means putting your money to work for you. It is a different way to think about how to make money. Growing up, most of us taught that we could earn our income only by getting a job & working. And that's exactly what most of us do. This report is about the study were to identify the preference of investors towards various investment avenues, public awareness & preference of mutual funds and find out the purpose and objectives of the investment. Also, the risk profile was accessed information pertaining to the factors affecting the choice of mutual preferred mutual funds scheme's purpose of investment, etc. The research design adopted was a descriptive type. The sampling technique adopted was cluster simple random sampling. A total of 120 samples were interviewed and appropriate data were collected. All the data were compiled and

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analyzed, using descriptive statistics as well as inferential statistics. Simple percentage analysis was used for descriptive analysis. Cross tabulation and chi-square were used for the inferential statistics. There are many different ways we can go through making an investment.

Keywords: Investment Pattern, Investors, Return, and Investment Period

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79 A review on renal tubular acidosis

Paper ID V7I2-1313 · Pages 434-436 · Nephrology

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Iftikar Khadas, Student, Independent Researcher

A rare renal condition, a known cause, but the lesser-known cause of Metabolic Acidosis, is Renal Tubular Acidosis. Renal Tubular Acidosis, or RTA as abbreviated, is due to mechanisms that dismantle the balance of Hydrogen and Bicarbonate in the blood-urine axis, leading to a lower pH, or acidic blood, as well as a vast array of complications associated with it. History dates the first indexed appearance to Lightwood in 1935, and Butler et al in children. About a decade later, in 1945, Baines et.al described it in adults. This review article looks at the literature and provides a brief insight into the topic

Keywords: Nephrology, RTA, Renal Tubular Acidosis, Medicine, Harrison, Renal, Kidney

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80 Digital onboarding for banks & financial services

Paper ID V7I2-1350 · Pages 437-439 · Product Management

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Since the onset of COVID-19 in the year 2020, organizations across the globe have been forced to do business with minimal human contact. Global fin-tech & banking industries are no exception. Fin-techs are leveraging this opportunity to eat into the business that traditional financial organizations, as well as banks, had previously taken. It’s becoming essential for banks, and traditional financial services organizations to move onto digital processes, digital customer onboarding being a critical piece of it. Regulatory KYC processes make onboarding a tricky affair. However, today’s digital ecosystem and advancements in CV & AI allow financial institutions to onboard customers with zero human interaction in most cases.

Keywords: Digital Onboarding, Machine Learning, Document Verification, Facial Biometric

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81 Static structural analysis of a brake pedal

Paper ID V7I2-1358 · Pages 440-442 · Mechanical Engineering

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This work contains the design and analysis of the brake pedal for a Formula 3 Vehicle. different ‘Engineering

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Software' like SOLIDWORK and ANSYS are utilized for the analysis of brake pedal, considering the structural aspects. s. In this work, every progression of the design was assessed and all the results of the analysis have been interpreted. Finite element analysis has provided a lot of new opportunities for the development of new components and it saves a lot of time and expenditure on the proof of concept. Popular finite element software is ANSYS, ABACUS, etc. This software is proved to give an almost accurate solution. However, these results are considered to be approximate results. In the current research paper, Static structural analysis of a brake pedal is presented using ANSYS. It is specially designed and used for an F3 Vehicle. It has features like weight optimization and sufficient stiffness to absorb all the forces acting on it. The result has been compared with different meshed models like tetrahedron, hexahedron and the combination of both and the comparative analysis has been reported. It is observed that there is a significant difference in stress, deformation based on the mesh, however, the stress and deformation are within the limits. Hence, this research paper will be helpful in the future for predictive analysis.

Keywords: Brake Pedal, Meshing, Solidwork, and Ansys

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82 Experimental and investigation on improving the life of spark plug using nickel(Ni), chromium(Cr), zinc(Zn)

Paper ID V7I2-1361 · Pages 443-448 · Mechanical Engineering

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The development of a high-performance, the long-life Spark plug has become essential in response to these demands. While improving performance (high ignitability and low required voltage), the discharge port of the Spark plug needs to be reduced in size. But, in the past, this has been difficult because of the limitations in terms of wear. It has been difficult to achieve both smaller discharge parts and longer life. To dramatically improve wear resistance, we researched materials that are both resistant to oxidation and have a high melting point. Through this project, we are going to increase the sparkplug life and performance. This paper discussed the ZINC, CHROMIUM, NICKEL Coating on the Spark Plug and evaluate the Knoop Hardness and carbon deposition properties.

Keywords: Zinc, Chromium, Nickel

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83 Nutritional status based on body mass index among lactating mothers (18-35 yrs) of namkom block

Paper ID V7I2-1356 · Pages 449-452 · Home Science

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The nutritional link between the mother and the child continues even after birth. The newborn baby depends for some period solely on breast milk for his existence. The nutritional status of an individual is related to many factors and is influenced by food intake, quantity & quality, & physical health, range of nutritional status spread from obesity to severe malnutrition. A study was carried out to find out the education and nutritional status among lactating women. A total of 250 lactating mothers were taken for the study. the age group of mothers was between 18 – 35 years. The questionnaire was prepared for the data collection of the respondents, it included general profile the information about age, education, occupation, total income, and activity levels, and anthropometry assessment it included height, weight, and BMI(body mass index). According to the study maximum respondents were studied up to class 8- 10 that is 30.80 %, very less were illiterate they were 8.40 %, 1.60 percent were studied class up to 5 whereas 17.20 percent were studied class 5-8,18.80 percent were studied till class 12 and 13.20 were studied up to graduation. The nutritional status of most respondents was in the normal range i.e. 58.8 percent followed by mild malnutrition 17.6 percent, preobese 12.8 percent, severe malnutrition 4.8 percent, moderate malnutrition 3.6 percent, overweight 1.2 percent, class 1 obesity 1.2 percent.

Keywords: Nutritional Status, Lactating Women, BMI, Education, Malnutrition

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84 Authentication encryption scheme using leopard and chaotic tent map algorithm for smart grid

Paper ID V7I2-1317 · Pages 453-458 · Electrical Engineering

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Smart Grid (SG) has gain popularity due to reliability, efficiency, and sustainability. They transmit periodically collected reading. The reading contains very sensitive data such as personal information and geometric locations. Therefore, transmission and storage of data have many security challenges such as eavesdropping and tampering attacks. This proposes a novel authentication encryption scheme that provides confidentiality, integrity, and authentication of the data. To achieve these objectives, we have hybrid the LEOPARD and chaotic tent map algorithm. The LEOPARD algorithm provides confidentiality and the chaotic tent map algorithm gives the authentication tag to verify the data integrity and authentication. The algorithm is simulated in MATLAB. The experimental results show that the proposed algorithm provides better results as compared to the existing algorithms in terms of PSNR, execution time, and security.

Keywords: Chaotic Tent Map, Leopard, AES, Smart Grid, Security

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85 Design and analysis of myoelectric prosthetic hand

Paper ID V7I2-1369 · Pages 459-462 · Mechanical Engineering

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Due to accidental trauma, war, and congenital anomalies, the citizenry is suffering since long ago. Also, amputation and deformity have been carried out. The human hand has complex hierarchical control with more amount of degrees of freedom. 3D printable prosthetic hand prototype has been designed and analyzed using Solidworks 2018 and Ansys workbench 16.2 software respectively. Stress and deformation analysis of Palm and Motor attachment beams has been done to know the strength and Maximum load-carrying capacity of the hand. The main objective was to reduce the weight of the hand and to make it more comfortable so that it would take place of the real hand or at least come closer to it in terms of functionality using EMG technology for control of the Hand. Weight of hand 370 gram with a factor of safety 2.2. However, this new cost-effective advanced prosthetic hand is going to be very helpful for the amputees who are surviving without a hand.

Keywords: Electromyography (EMG) Signal, Prosthetic Arm, EMG Based Control Introduction

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86 Improved vehicle number plate detection with bounded segmentation and random forest

Paper ID V7I2-1363 · Pages 463-467 · Electronic And Communication

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Automatic Number Plate Recognition System is the identification system of vehicles. It is an image processing technology used to identify the vehicles only by their license plates. Automatic Number Plate Recognition ANPR plays am major role in management of parking areas, and surveillance of illegally parked vehicles. Since every vehicle has a unique number plate so it can be identified by its number plate. The classification is utilized for the electronic toll-collection system (ETC) and to display available parking spaces to vehicles. The identification is also employed for managing parking facilities, monitoring and analysis of traveling time, and security systems such as observation of stolen vehicles and monitoring of unauthorized vehicles entering private areas. Number plate recognition is realized by acquiring images of either the front or the rear of vehicles with cameras and then by image processing to identify license plates. In this paper proposed approach extract texture features and optimize by WCA then classified by Random forest.

Keywords: Random forest, WCA, Electronic Toll-Collection, Automatic Number Plate Recognition

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87 Detection and Prevention of Black hole attack by Grey Wolf Optimization in Wireless Sensor Network

Paper ID V7I2-1364 · Pages 468-472 · Electronic And Communication

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Wireless sensor network is a group of nodes that are connected to each other by wireless connection. These types of network work on the dynamic topology of the network because positions of nodes in the wireless network are changing continuously. The nodes in WSN are basically made up of small electronics device which are used for sensing, computing and transmitting the data. The nodes are run on the battery power during communication process. The battery consumption in WSN is very high due to high computation operations on it. In the recent years WSN grows at very high at the research area is also increased in this field to provide effective computation. major concern for maintaining the security of the system greatly depends upon the limited energy of the sensor nodes. Thus the communication and the computational measures for the measure of security should be kept small. Dealing with the issues related to security, the limited form of energy provides a challenging path with an additional set target research work done on the wireless sensor network by using the concept of leach routing of nodes and optimize the routing process by using the Grey Wolf Optimization algorithm. The GWO algorithm provides the optimal results. The optimal result provided by GWO reduced the time delay, dead nodes, and energy consumption and improve the network quality.

Keywords: Wireless Sensor Network, Grey Wolf Optimization algorithm, MANET

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88 Planning and scheduling for multi-story building using M.S project

Paper ID V7I2-1371 · Pages 473-480 · Civil Engineering

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Every one of us is a manager of projects of our own life. From an employee to financial analyst, from banker to doctor, from engineer to administrator, from a teacher to a student, we all work on different tasks with deadlines. For managing the events or activity, there is computer-based software which is particularly designfor the planning and secluding. Software like M.S Excel, M.S Project, and Primavera. This thesis is carried out forthe planning and scheduling of the M.S project. To know that this type of software is easy and efficient thanmanual methods. This software is basically based on manual methods but it is less time-consuming and precisethan manual methods. In this thesis construction, site planning and scheduling should be generated. The sitename is Indraprastha greens it is a multistorey building project of 10 blocks of 7 story. Each story has 4 flats,there are two types of flats each flat has 5 blocks. The project is constructed by a DEEP GROUP OF COMPANYS.In this thesis, E-block is select for the research of planning and scheduling in the Microsoft Project. Fromexcavation to finishing work schedule should be generated in the Microsoft project and notify the critical path.Resource allocation of every work and material should be provided. The cost of the work and material shouldbe calculated in the M.S project. From this thesis, the positive outcome of the planning and scheduling should specify. This thesis is actually researching and notifying the proper planning and secluding for the management of the project with Microsoft project and it will notify the duration, deadline, cost, and material.

Keywords: Planning, Scheduling, Organizing, Cost, Material, and Quantity

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89 Analysis of hub and knuckle of SAE Baja electric vehicle

Paper ID V7I2-1375 · Pages 481-485 · Automotive Engineering

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The Steering Knuckle component is the most important part of the vehicle which is connected to the front wheel with the help of a suspension system, wheel hub, and these are also connected to the steering system and brake to the chassis. The Steering Knuckle component provides motion to desired directions with the help of the steering system. It undergoes various types of varying loads under different conditions. In the Automobile industry efficiency and lightweight are the two main demands for the vehicle because the lighter steering knuckle resulting greater power and less vibration because of inertia is less. In this paper, we have done a static analysis of the steering knuckle component. Design, analyze, manufacture and test a wheel hub for an All-Terrain Vehicle (ATV). Using Finite Element Analysis as a method for reduction of cost in terms of material and manufacturing, Based on the outputs obtained from the previous design, new practical designs were generated and FE analysis was carried out for the optimized design to verify the strength of the hub. This optimized material resulted in a weight saving of the wheel hub without affecting the functional requirement. In this paper, we have done a static analysis of the hub of an ATV

Keywords: Steering Knuckle Component, Hub Component, Static Analysis, Material, and Ansys Workbench 19.2

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90 Static structural analysis of a water sprinkler using Ansys workbench

Paper ID V7I2-1379 · Pages 486-487 · Mechanical Engineering

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This paper contains a brief analysis of a mechanical component, which is used in almost all sorts of construction businesses, viz. “water sprinkler” in Fire Sprinkler System. The paper highlights changes observed in the results of the component, after analyzed with different meshing viz. linear-ordered tetrahedron; Quadratic-order tetrahedron; and Auto meshing provided by ANSYS workbench. The concentration graph is provided for visual analysis of critical portions (suggested to refer to the values instead). The result specifies the most appropriate meshing in order to obtain precise static structural analysis in efficient time.

Keywords: Ansys Software, Finite Element Analysis, Static Analysis, Water Sprinkler

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91 Literature survey on the elimination of effect on power transformers by using differential protection

Paper ID V7I2-1381 · Pages 488-489 · Electrical Engineering

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The word “Elimination” is generally used to describe the whole concept of removing or controlling the error value to the stationary value of the power system. In this paper, an effort is made in the direction of development in the protection of power transformers. Protection of all types of transformer in the power system is very important for normal operation of the power system. Among the various operation of power transformer differential operation is a very common method. In this paper, we review the concept of power transformer differential protection then analyze the problem of transformer differential protection to find the solution. We then analyzed the different types of fault for study.

Keywords: Differential Protection, Fault Current, Power Transformer

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92 Comparative analysis of hexahedral and tetrahedral mesh of guide bracket

Paper ID V7I2-1376 · Pages 490-492 · Mechanical Engineering

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In the following paper, an effort has been made to do the comparative analysis of hex mesh and tetrahedral mesh of a guide bracket to decide which mesh type to prefer in order to get accurate results in considerably less time. To analyze whether there is a significant impact of using hex dominant mesh and tetrahedral mesh. The bracket used in the analysis is modeled using solid works 2018 and the finite element analysis is done using “ANSYS 2020 R2 student workbench”. From the finite element analysis, I witnessed that there was a significant difference in the processing time of the two types of mesh and other parameters such as stress and strain were also having a noticeable increase with respect to results in the tetrahedral mesh. The results will

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thus help to gain knowledge on which mesh is best for future meshing on various models.

Keywords: Ansys, FEA, Tetrahedral, Hexahedral, Mesh

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93 Lost in the dark, a unity engine based videogame

Paper ID V7I2-1395 · Pages 493-494 · Computer Science And Engineering

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In this paper, we present the design and implementation of a game called Lost In The Dark. It is a unique game and developed keeping Windows Operating Systems in mind. The purpose of this project was to promote small-scale video games. The students playing our game go through FPP (First Person Perspective) in a dark place to find their way out where he simultaneously survives from the unknown entities. The player can elevate and complete the tasks so that he can move up to the next level in this unity-powered game.

Keywords: Unity Game Engine, 3Ds Max, Blender, Visual Studio, C#, Animations

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94 ECG simulator

Paper ID V7I2-1400 · Pages 495-496 · Biomedical Engineering

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An electrocardiogram is information of heart signals and activities of an individual measured by electrocardiography using an electrocardiograph machine. Machines tend to have malfunctions, failures, errors, damages, and misuse on usage. Medical equipment cannot be neglected to exist with such factors as it is concerned and connected to the lives of patients. There are several medical errors repetitively ruining several lives every year globally. Therefore, in this case, an ECG Simulator is used to perform calibration and testing over the instruments such as patient monitors and other electrical heart activity recording equipment periodically. To make this viable to every region, we need an economically convincing model. Models: We developed a simulator with basic electronic components for normal sinus rhythm signals generating over 60 and 120 beats per minute. We also developed another simulator that can be loaded with processed ECG arrhythmia signals essential to effectively test any instrument. Result: Both the models produced a promising output as per their configuration respectively.

Keywords: Electrocardiogram (ECG), Electrocardiograph Machine, Simulator

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95 Comparative evaluation of quantification of gastroretentive drugs through ultraviolet spectrophotometer and high-performance liquid chromatography

Paper ID V7I2-1399 · Pages 497-501 · Pharmaceutics And Biotechnology

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Quantification is a major step in the pharmaceutical industry for determining the quantity and quality of a specific Active Pharmaceutical Ingredient in each drug formulation. This step is a major step for commercializing and marketing the drug. Several methods have been developed for the quantification of the drug but the most used are UV and HPLC methods. In this study, we try to review the various quantification methods by UV and HPLC and accomplish that which method is better for the Quantification of Gastroretentive drugs. Gastroretentive drug delivery system is a type of drug which retains for a prolonged time in the Gastrointestinal tract and does not get disintegrated immediately. One type of Gastroretentive drug is Gastroresistant drugs which do not disintegrate regardless of the acidic pH of the stomach but gets absorbed in the surface of the intestines at a basic pH. This is possible because these types of drugs are enteric-coated. Spectrophotometry techniques can be used as an alternative method for HPLC for the quantification of Gastroretentive drugs.

Keywords: Gastroretentive Drugs, Gastro-Resistant, HPLC, UV-Spectrophotometer

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96 Contact lenses: advances and future aspects

Paper ID V7I2-1383 · Pages 502-506 · Pharmaceutical Science

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Contact lenses are the smallest and least visible and easily used for correcting refractive errors of the eye. Contact lenses are available in different types shapes, sizes, and colors. With time the purpose of the contact lenses changed from just correcting the refractive errors to the beautification of the eye. And also, with time it is coming out with numerous types of modification in itself for the better use of it and also eases of using them. In this paper, the advancements and future aspects of contact lenses are vividly discussed.

Keywords: Contact Lenses, Care, Recent Trends

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97 Impact of mesh size on UV joint and flange coupling in static structural analysis

Paper ID V7I2-1402 · Pages 507-512 · Mechanical Engineering

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The finite element analysis, mesh size plays a very important role in determining the accuracy of the result. This paper gives an idea about the effect of mesh size on the result. On the basis of the results obtained one can get an idea regarding, choosing the appropriate mesh size during analysis. Static analysis is performed in Ansys software. The models under consideration are UV joint and Flange coupling assembly (both separate) which are made in Solidworks

Keywords: Finite Element Analysis, Mesh Size, Mesh Density, Variation in Meshing, Static Structural Analysis, UV Joint, Flange Coupling

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98 Management of Haemangioma with Ksharasutra- A case study

Paper ID V7I2-1343 · Pages 513-516 · Shalyatantra Ayurveda

Dr. Prerana Santosh Bandekar, Assistant Professor, Dr. J. J. Magdum Ayurvedic Medical College, Jaysingpur, Maharashtra

A Haemangioma is a developmental malformation of blood vessels and not a typical tumor. So it is considered to be an example of ‘Hemartoma’. Such theory can be explained by the fact that 1)Haemangioma is often present since birth and 2)it never turns malignant. In Ayurveda Haemangioma can be compared with rakija granthi. The diagnosis is based on clinical examination and usually straightforward by visual inspection. The treatment of Haemangioma has to be done with endurance and careful selection of procedure according to the type and size of the disease; otherwise, it may lead to cosmetic derangement or recurrence of the ailment. Indications for treatment include pain, interference with function, cosmetic embarrassment. Regarding the management of this disease, different types of treatment procedures are explained in contemporary science. In Ayurveda also, various treatment principles explained like the administration of drugs internally, external application of drugs, and para surgical procedures [i.e. Raktamokshana (bloodletting), Ksharakarma (chemical cauterization), Ksharasutra (medicated thread ligation), and Agnikarma (thermal cauterization)]. These indigenous treatment methods are minimally invasive procedures that do not cause scar formation, no recurrence, and found to be more beneficial in the treatment of Haemangioma. .this case study will reveal the management of haemangioma through Maharashtra along with internal medications. A female patient of age 24 years complained of small swelling on the left breast. . Patient was the diagnosed case of haemangioma. After required investigations and local examination of swelling, the patient was planned and treated(Ksharasutra, Jatyadi tail) Ayurvedic formulations as described in texts of Ayurveda.

Keywords: Heamangioma, Ksharasutra, Jatyadi Taila, Shodhana, Ropana, Raktaja Granthi

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99 Effect of mesh parameters on spring damper assembly

Paper ID V7I2-1413 · Pages 517-520 · Mechanical Engineering

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Finite Element Analysis is a method to predict how a model will react to real-world forces and other physical effects. It shows whether the product will break, wear out or work the way it was designed. The spring damper assembly is a part of the suspension system which is cylindrical in shape. The spring permits the wheels to rise up to absorb jolts in the road. While dampers avert bouncing of the vehicle. This reduces the jolting of the vehicle various mechanical links keep the wheel in line. The spring damper assembly is modeled in CREO and analyzed in ANSYS. Results of ANSYS shows how different meshing method can affect the final results which include stress, strain, and deformation

Keywords: Spring and Damper Assembly, Mesh, Creo, Ansys, Analysis

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100 Assessing provision of social amenity sites in peri-urban Bangalore

Paper ID V7I2-1404 · Pages 521-526 · Urban Studies

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The study examines the provision of sites for public semi-public use in residential districts which are emerging as city extensions in the peri-urban. The dynamic nature of the peri-urban is incorporated in the methodology of the study where some portions of land are parcelled for urban uses while some parts retain the rural fabric. The existing provision is evaluated with respect to URDPFI Guidelines to assess the level of provision. The number of plots and the area of the plots is considered as criteria to assess the provision. Thematic analysis is conducted for various categories of plots identified. This study examines the adequacy of the provision in the context of the method adopted by the local authorities for the transformation of agricultural land into urban residential land parcels. The complexities of identifying land for public semi-public use in the peri-urban context are discussed.

Keywords: Public Semi-Public Use, Peri-Urban, Housing Cluster, Neighbourhood, Social Amenity Sites

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101 Thermal analysis of ventilated and drilled disc brake

Paper ID V7I2-1418 · Pages 527-530 · Mechanical Engineering

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In the recent automotive industry, a braking system is considered to be very important in terms of the safety of the driver. FEA is a basic simulation of a physical component and is used for performing mechanical analysis. FEA is very essential before the production of any component of a vehicle. In this paper, a ventilated and drilled type of disc brake is taken as the component which has been thermally analyzed. This thermal analysis is done

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with the use of Ansys Workbench 2020 R1 and the component is modeled using the SolidWorks software. In this paper, a brief idea about the effect of different meshing sizes as well as the type of meshing using finite element analysis is considered and consequently, the thermal analysis of the same has been calculated. The results obtained illustrate the effect of the difference in mesh size and the type and how it plays an important role in the analysis of any component.

Keywords: Finite Element Analysis, Meshing Size, Ansys Workbench 2020 R1, Solidworks, Ventilated Disc Brake, Drilled Disc Brake

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102 A review on the role of packaging: materials and methods involved in the process of food preservation

Paper ID V7I2-1414 · Pages 531-538 · Food Microbiology

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Food packaging is an essential part of the food processing industry. It surrounds, enhances, and helps in the protection of the food product from processing till it reaches the consumer. The packaging sector currently represents 2% of the gross national product in developed countries. Efficient food packaging methods such as vacuum, modified atmosphere, and active packaging helps in preventing deterioration. Oxygen scavengers, carbon dioxide absorbers, moisture-controlling agents prevent oxidative reactions and excess moisture in the food and extend the shelf life of the product. The choice of packaging material such as glass, plastic, paper, cardboard, and metals will determine changes that occur in food products and the degree of protection depends on water vapor and oxygen transmission rates. It is necessary to test the packaging materials with respect to thickness, grease resistance, gas transmission rate to ensure the safety and efficacy of the product. In order to safeguard the interest of consumer; the government has introduced packaging laws and guidelines such as PFA Act (1954) that is to be followed by food processing industries. The historical development of packaging has led to the discovery of novel packaging methods which help in long time preservation of food products. Novel packaging systems include the use of IOSP, TTI, and antimicrobial packaging uses sensors to detect and inform the stakeholders about spoilage or temperature-time-based changes in the food products in order to implement necessary action. Additional efforts are essential for promoting environmental sustainability, and to overcome problems like the high costs associated with these packaging methods.

Keywords: Food Packaging Materials and Methods, Food Spoilage, Preservation Methods, Functions and Types of Packaging, Packaging Testing and Laws, Novel Packaging Methods, Environmental Sustainability

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103 A review on the utilization of textile waste to manufacturing bricks

Paper ID V7I2-1366 · Pages 539-542 · Civil Engineering

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The textile industry is one of the oldest and largest sectors in India. As the industrial growths increasing day by day, waste generation also increases day by day. There is a need to figure out a different way to use textile waste. Waste resulting from textile industries creates the problem of disposal. Moreover, dewatered waste is usually disposed of by spreading it on the ground or filling it in the land. Landfilling, on the other hand, might not be an effective waste disposal method in highly urbanized cities due to land scarcity. This paper demonstrates that textile waste can be used to make bricks with a proportionate mix and design.

Keywords: Textile Waste, Bricks, Compressive Strength, Water Absorption

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104 A novel machine learning approach with low-dose computerized tomography (CT) and magnetic resonance imaging (MRI) optimization for the early diagnosis of prostate cancer

Paper ID V7I2-1403 · Pages 543-548 · Computer Science

Pritivi Rajkumar, Student, Independent Researcher

According to the American Cancer Society, prostate cancer is the second most common cancer and the second leading cause of cancer death among men in the United States. Without an early diagnosis, the chances of related complications such as Lymphoedema, Metastatic Spinal Cord Compression (MSCC), and Hypercalcaemia increase by almost threefold. However, current diagnosis tools are time-consuming, extremely invasive, and result in low accuracy with about an 89 percent false-positive rate. The objective of this study is to provide a non-invasive early diagnosis of prostate cancer by rapidly converting low-dose radiation computed tomography (CT) and magnetic resonance imaging (MRI) scans into superior quality scans. Thus, reducing radiation exposure and increasing the efficiency of diagnosis. The project consisted of developing three main sectors: denoising, generation, and classification. The denoising sector consisted of an AutoEncoder and a CNN (Convolutional Neural Network). Due to limited training data available, a GAN (Generative Adversarial Network) was used to reliably generate more training data, prioritizing the overall efficiency. The GAN was trained on a small portion of the main dataset and drastically optimized the performance of the overall model. The final classification sector consisted of a DCNN (Deep Convolutional Neural Network) for the diagnosis. Overall, these steps resulted in an algorithm that can diagnose prostate cancer with an accuracy rate above 85% all in an accessible and scalable platform, which is a profound improvement over current methods.

Keywords: Smart Healthcare, Machine Learning, Artificial Intelligence, Prostate Cancer, Cancer-Screening

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105 Proof of P=NP

Paper ID V7I2-1406 · Pages 549-550 · Computer Engineering

Sanket Kulkarni, Student, Independent Researcher

The aim of this work is to find subsets of an array whose sum is K in polynomial time and hence to provide proof of P=NP

Keywords: P vs NP, Subset Sum, Algorithm

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106 Thermal analysis of brake drum

Paper ID V7I2-1424 · Pages 551-554 · Mechanical Engineering

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Excessive thermal stresses can cause undesirable effects on the material of the brake drum. Which leads to the initiation of a crack. This paper gives the basic idea to analyze thermal stress and thermal expansion in a brake drum of a heavy commercial truck due to temperature distribution in severe braking conditions. The analysis is done using the finite element approach in ANSYS software by stimulating temperature distribution and the thermal stress distribution within brake drum material. The evaluation of simulation results will help in prediction and contribute toward improving the design, modeling, and analysis techniques for the integrity of the thermo-mechanical systems that subjected to high temperatures.

Keywords: Ansys, Static Structural, Heat Flux

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107 A critical review of consideration of housing design in rural housing policies and programs in India

Paper ID V7I2-1415 · Pages 555-559 · Architecture And Planning

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Housing is universally acknowledged as the second most essential human need after food and is considered a major economic asset of every nation. Internationally, housing is recognized as a factor for the assessment of human development and societal civilization (UNO, 1976). Humanity has been living in these houses and especially villages for centuries, and the way people build their houses and group them is the result of centuries of experience, which is the result of continuous interaction between the culture of the community and the physical environment of the region (Chandhoke, 1977). There were various housing programs and policies in India since independence as there is an acute shortage of quality housing. This paper aims at understanding the rural housing programs & policies in India and critical review aspects related to housing design.

Keywords: Rural, Village, Housing, Design, Policies, and Programs

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108 Incorporating background knowledge in tucker

Paper ID V7I2-1352 · Pages 560-567 · Machine Learning

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Knowledge graphs are a way to represent a large number of relational facts coming from real-world knowledge. Since that knowledge is generally incomplete, a vast research area, known as Link Prediction is devoted to infer possible unknown facts based on the existing ones. We focus on a recent state-of-the-art linear model called TuckER that was introduced for the task of link prediction by Balazevich et al. (Balazevic et al., 2019). In this project, we propose ways to incorporate background knowledge about symmetric and asymmetric relations. We show that our model performs better than the TuckER model on those relations while requiring half of the parameters.

Keywords: Knowledge Graph, Link Prediction, Tucker Decomposition

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109 Review of Rebar CAD/CAM system and Conventional Method

Paper ID V7I2-1431 · Pages 568-572 · Civil Engineering

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This project is designed to review two different methods used in construction for the purpose of rebar estimation. The two methods reviewed in this project are- Conventional Method and Rebar CAD/CAM System. The Conventional Method is done manually. In this, Bar Bending Schedule [BBS] is created manually and all the calculations which are needed for this are done manually. Rebar CAD/CAM System proposes a business-to-business [B2B] e-Work system to improve the approval process for Bar Bending Schedule [BBS]. This system is composed of extensible mark-up language-based databases that support essential tasks of the approval process such as design and revision of structural drawings, bidding, shop drawing preparation, revision, and correction, and rebar delivery.

Keywords: Steel quantity surveying, steel quantity, valuation, steel wastage, Environmental effect of steel, Computer Aid design, conventional method

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110 Comparison of element order and span angle center by static structural analysis of column support by FEA on Ansys

Paper ID V7I2-1435 · Pages 573-577 · Mechanical Engineering

Sonia Manoj Pardeshi, Student, Vishwakarma Institute of Information Technology, Pune, Maharashtra

A Column Support is a load-bearing component where maximum force is applied in the center. This can be used to hold and support a vertical pipe or beam for a fixed and trusted grip. The material used for column support is structural steel because it provides strength and durability. There are three holes on the base of the component, which help fix it to the surface. This paper is about static structural analysis of column support,

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modeled on Creo Parametric, and analysis is done using ANSYS Workbench. Finite Element Method (FEM) divides a component into small and simple parts called finite elements, which is implemented by creating a mesh of the object. Analyzing a process with the finite element method is called finite element analysis. By performing static structural analysis, total deformation, equivalent elastic strain, and equivalent stress were calculated. It is observed that element order with the highest nodes, gives maximum deformation, strain, and stress to the elements with the least nodes.

Keywords: Column Support, Ansys Workbench, Static Structural Analysis, Meshing, Span Angle Centre, Element Order

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111 A legislative analysis of mental health with shortcomings persisting in present Indian legislation

Paper ID V7I2-1455 · Pages 578-582 · Legal

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As it is essential to accurately assess an offender's mental status so assessing the first research question that we have at hand is whether individuals with mental disorders are more prone to the committing of violent crimes when compared to mentally healthy people and as violent behavior may directly result from psychotic symptoms such as paranoid delusions which draws an inclination towards creating a continuing source of controversy over this issue. But there is also a contribution of personal violence and psychosis to this aspect. It is proved that individuals discharged from mental hospitals with no history of substance abuse had the same risk of violence as those without a history of either mental disorders or substance abuse and the point of conflict arises here which will be explained further. Moreover, when it comes to the discussion of stigma attached to mental disorders there are many people with serious mental illness who are challenged doubly. On one hand, they struggle with the symptoms and disabilities that result from the disease. On the other, they are challenged by the stereotypes and prejudice that result from misconceptions about mental illness. As a result of both, people with mental illness are robbed of the opportunities that define a quality life: good jobs, safe housing, satisfactory health care, and affiliation with a diverse group of people. Public stigma is the reaction that the general population has to people with mental illness. Self-stigma is the prejudice which people with mental illness turn against themselves. Both public and self-stigma may be understood in terms of three components: stereotypes, prejudice, and discrimination. Stereotypes are considered "social" because they represent collectively agreed-upon notions of groups of persons.

Keywords: Mental Health, Family, Shortcomings

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112 Effect of applied rotational velocity in finite element analysis

Paper ID V7I2-1457 · Pages 583-586 · Mechanical Engineering

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A highly important research issue in this modern world is stress on the connecting shaft when a rotational

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velocity is applied to one of the gears connected to the shaft. This project aims on finding the variation in stress, deformation, and fatigue when two different rotational velocities are acted on the gear. The finite element analysis method takes at one place a single complicated shape with an approximately equivalent network of simple elements. The overall pattern of elements is referred to as a finite element mesh. For the solution to be uniquely defined the boundary conditions are to be specified. In the given project an end of the shaft is fixed to get the deformation of the assembly after rotational velocity is applied. The components were modeled and assembled in FUSION 360 and the analysis was done in ANSYS software workbench interface.

Keywords: Boundary Conditions, Fatigue, Finite Element Analysis, Mesh Size

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113 Structural analysis of index finger assembly of the robot

Paper ID V7I2-1421 · Pages 587-591 · Mechanical Engineering

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An index finger of a robot fits in a palm whose function is to perform a certain task or to touch any object for sensing it. The finger is mostly made up of ABS (Acrylonitrile-Butadiene-Styrene) is a low-cost engineering thermoplastic that is easily machined. The assembly consists of the Front piece, Middle piece, Lower piece, Servo Motor, and Motor handle. The main aim of the paper is to evaluate the structural analysis of Index Finger Assembly. Input will be the Index Finger Assembly SOLIDWORKS model and the outputs will be Total deformation, Stress, and Strain plots. The model and analysis are performed using SOLIDWORKS and ANSYS Workbench. Structural analysis is performed on Index Finger Assembly with ABS (Acrylonitrile-Butadiene-Styrene) and Structural Steel material to validate Equivalent stress, Equivalent elastic strain, and Total Deformation.

Keywords: Index Finger, Structural Analysis, Solid Works, Ansys

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114 Rebar CAD/CAM system

Paper ID V7I2-1448 · Pages 592-598 · Civil Engineering

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Improper way of using steel reinforcement in concrete incurs undue wastage of money in the construction projects. Wastage of rebar can be realized even at the design stage and can propagate through every stage of the construction process. The study respondents were contractor’s and consultant’s managers, designers, bar benders, supervisors, and quantity surveyors. Central value analysis, correlation, and regression analysis were conducted on the data collected, using Rebar Cad/Cam software to confirm the factors influencing the wastage of steel. The cost estimated in the bill of quantity and the final costs after the provision of the steel with any alterations were compared and the reasons for cost overrun were analyzed.

Keywords: Steel Valuation, Steel Wastage, Bar Bending Schedule, Computer Aid Design

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115 Static structural analysis of simply supported beam with distributed load

Paper ID V7I2-1459 · Pages 599-601 · Mechanical Engineering

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This paper studies the maximum & minimum deformation and stress analysis of a Simply Supported Beam with an evenly distributed load which comes under Static Structure analysis. The theoretical calculations are done by using the general formulae. The computative analysis is done on ANSYS 2021 R1 (Student Version) software. Comparing the theoretical results with analytical results to those obtained from the software are approximately the same.

Keywords: Computative Analysis, Deformation, Simply Supported Beam

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116 Block-wise data hiding using an improved flipping algorithm for image steganography

Paper ID V7I2-1441 · Pages 602-606 · Computer Science Engineering

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Sarabjeet Kaur, Assistant Professor, Adesh Institute of Engineering and Technology, Faridkot, Punjab

Image steganography algorithms hide the secret data in the cover image and give the stego image in the output. The visual quality is degraded due to data hiding. In the literature, the flipping algorithm is the most preferred data hiding algorithm to reduce the variability. In this algorithm, the secret data is flipped if the variability between the cover and stego image is greater than 50%. In our work, we have enhanced this algorithm and designed an improved flipping algorithm. In the proposed algorithm, the cover image is processed in blocks and each block variability is determined. If the variability of the block is higher than the threshold value then secret data is flipped and hide in the cover image. Thus, in the proposed algorithm, in some blocks, secret data is hidden in the original form and some blocks in flipped form. In the last, we have performed the experimental results on the standard dataset images and various parameters calculated. The result shows that the proposed algorithm enhances the visual quality of the cover image as compared to the existing algorithms. However, in the proposed algorithm need to communicate information with the receiver, the data is hidden in the original or flipped form.

Keywords: Data Hiding, Flipping Algorithm, Steganography, Security

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117 Static structural analysis of brake disc for FSAE vehicle

Paper ID V7I2-1423 · Pages 607-612 · Mechanical Engineering

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The paper presents the design and analysis of disc brake for FSAE competitions. Finite element analysis to evaluate the performance under severe braking conditions by comparing two materials. Grey Cast iron and stainless steel are used as disc brake materials. DS Solidworks 2020 and ANSYS 19.2 are used to design and carry out the analysis for determining the distribution of forces, variation of stresses, and deformation across the disc brake. The most reliable and efficient material of disc brake which can survive severe braking conditions which are required in FSAE competitions is determined. Static structural analysis has been carried out using the axis-symmetric finite elements. To get appropriate results the model is divided into discrete elements so that the forces are applied effectively in each region

Keywords: Disc Brake, Grey Cast Iron, Stainless Steel, FSAE, Solidworks, Ansys

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118 Static structural and thermal analysis of single-cylinder engine

Paper ID V7I2-1463 · Pages 613-620 · Finite Element Analysis

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Structural analysis is the process of studying the effects of loads on the physical structure and its components. Single Stroke engine consists of a piston, a connecting rod, a crankshaft, and one cylinder. This paper contains the static structural analysis of a Single Stroke Engine and its components i.e., Piston, crankshaft, and connecting rod. Single Stroke engine is mostly used in motorcycles, motor scooters, go-karts, all-terrain vehicles, radio-controlled vehicles, portable tools, and garden machinery (such as lawnmowers, cultivators, and string trimmers). Single Cylinder engines are simpler and more compact when compared to multi-cylinder engines. Effects of loads and different boundary conditions are observed on the single stroke engine using ANSYS software. Ansys Mechanical APDL suite is used for static structural analysis. The material used in this analysis for the Single Stroke Engine is Structural steel. The aim of this paper is to determine the total deformation, Equivalent stress, Equivalent strain on the single stroke engine and its components. Modeling and assembly of parts are done on CATIA V5R21.

Keywords: Structural Analysis, Finite Element Analysis, Meshing

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119 Static structural analysis of ventilated disc brake upon application of fixed support, pressure, and rotational velocity

Paper ID V7I2-1478 · Pages 621-624 · Mechanical Engineering

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Automotive braking systems are one of the most important safety systems of road vehicles. They are mainly used to decelerate vehicles from an initial speed to a required speed. In the current paper, static structural for the brake is done using Ansys Workbench 2019 and the CAD model is created using Solid Works. This paper deals with Static Structural analysis of Ventilated Disc Brake upon application of Fixed Support, Pressure, and Rotational Velocity Static Structural is much needed and monitoring that for maximum loading conditions for Ventilated Disc Brake approach can be used for prophecy purpose

Keywords: Ansys, Disc Brake, Workbench, Ventilated Disc Brake, Static Structural

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120 Public key encryption with keyword search

Paper ID V7I2-1479 · Pages 625-628 · Cloud

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Today's entrepreneur world demands huge storage for the data and elementary sharing of the same. Cloud storage serves the requirement of providing security to the files uploaded by the organizations. Security prior to uploading the data is provided by encrypting the files and creating keywords to shield the organizational secrets from strangers. The other challenge faced by the organizations is the Insider keyword guessing attack, which results in the hackers being the employees themselves. To address this variant of threat, We propose a system that has a hierarchy developed between the employees such that the higher-level employees can monitor the activities of the lower-level workforce by constructing a semi-generic Public Key Tree. The PK-tree is constructed by the support provided by the Hierarchical Public Key Encryption with Keyword search [HPEKS] a variant of the public key encryption with keyword search [PEKS]. It furthermore enjoys transparency to the owner provided the admin-1 verifies the user login and Admin-2 will send the OTP (One time Password) such as the secret key to the user to their Registered mail Id which will be used to secure the data and records the activity. The efficiency of the system is analyzed by eradicating the insider attack threat.

Keywords: Hierarchical, Public-Key, Encryption, Keyword-Search, Cloud, Storage, Database, Secured-Data, Insider, Keyword, Guessing-Attack, Admin, User, Owner, Security Purpose

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121 Human behavior unpredictability (oracle) algorithm

Paper ID V7I2-1477 · Pages 629-630 · Human Behavior

Duane Thomas Dsouza, Student, Independent Researcher

Background even though human beings are viewed as complex beings and each with their own characteristic behavior it is possible and can be ascertained that not everything is different and that it is possible to predict human behavior. Methods in this study, I made a study of my own predictability and used my own observations in this study.and further i can conclude that it is possible that by using a study group of individuals in a random sample selection of 100 0r more individuals and by preparing a group study of their preferences like places they visited or the things they like or the videos games in case of teenagers and a percentage can be generated through which it can found the things that are common between these clusters of random individuals what they think and how they perceive each ones taste and quality alike and thus both percentages of what is similar and what is uncommon can be studied thus preparing a chart of what pertains to be a compendium of behavioral analysis and thus giving the predictability of human behavior conceptualized although in most surveys or polls there are statistical anomalies the percentage error using statistics Conclusions the behavior of individuals can be predicted and thus i am able postulate a theory which can be useful to society in general from knowing how the human mind thinks alike from certain age to a certain race/culture it is possible to get a result which may be almost exceptional and thus prove that all human minds connected to form a link and thus give a predictable pattern of what is human thinkingThis involves to a certain extent the theory of probability as well and its implications and results to a large number of trials displaying the implications concerning the outcomes similar examples involving people individuals etc. and even though these occurrences happen in a large number of people but are not predictions about a given individual my aim is to produce the converse where knowing the behavior of a group of individuals produce the anomaly of the required result and its implications as well.

Keywords: Predictability, Unpredictability, Human Behavior, Algorithm

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122 Analysis of sprocket with the help of FEA in Ansys

Paper ID V7I2-1460 · Pages 631-634 · Mechanical Engineering

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A sprocket, sprocket-wheel, or chainwheel is a profiled wheel with teeth, or machine gear-pieces, that network with a chain, track, or other punctured or indented material. The name 'sprocket' applies by and large to any wheel whereupon spiral projections draw in a chain disregarding it. The sprocket is a very basic part of the transmission of energy and development in most bicycles; they exist in various estimations, teeth number and are made of different materials. All around sprockets are made of smooth steel.

Keywords: Sprocket, Ansys Workbench, Static Structural Analysis, Mesh

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123 **FEA analysis of a knuckle upright for a formula student car**

Paper ID V7I2-1468 · Pages 635-639 · Mechanical

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This research study is focused on providing FEA analysis of a formula student car steering knuckle uprights to check the factor of safety. The model was designed in Solidworks® 2018 version and static structural analysis was carried out in Ansys® Workbench 2019 R3. Steering Knuckle uprights are used to connect steering tie rods suspension arms to wheel assembly(HUB) and also hold brake calipers. Being part of a wheel, it is always in motion and sustains too much load. So it needs to be stiff at the same time as lightweight as possible. The material used for knuckle is Aluminium 7075 T6. Total deformation of 0.1752 mm was observed. Results are fairly reliable and can be utilized to go further with the manufacturing of the knuckle uprights.

Keywords: Formula SAE, Knuckle Upright, FEA

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124 **Study of mesh refinement on thermal analysis of engine cylinder block**

Paper ID V7I2-1392 · Pages 640-643 · Mechanical Engineering

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The Engine Cylinder block is the structure that contains the cylinders, and connecting rods of pistons of an internal combustion engine. The engine block consisted of just the cylinder block, to which a separate crankcase was attached. Engine blocks often also include elements such as coolant passages and oil galleries. Many names such as "cylinder block" or simply “Engine Block” are also known by the engine block. Any modern engine block (which has multiple cylinders in a single component block) would be classified as a monobloc. A cylinder block contains the cylinder, cylinder sleeves, coolant passages, and some space. At the starting of internal combustion engine development, cylinders were cast individually, so cylinder blocks were produced individually for each cylinder. With an increase in mass-production and technology, engine manufacturers combined two or three cylinders into a single-cylinder block, with an engine combining several of these cylinder blocks. The cylinder block being the heart of the engine receives too much heat. This paper aims to evaluate the performed static thermal analysis of the block under severe thermal conditions. The block model and analysis are performed using Solidworks and Ansys Workbench. Thermal analysis is performed on the Cylinder block with structural steel to validate thermal properties and working.

Keywords: Ansys, Thermal Analysis, Cylinder Blocks, Solidworks

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125 **Art education in the digital era**

Paper ID V7I2-1487 · Pages 644-647 · Visual Media

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The first external expression of a human being’s soul is art. Art surrounds life, without us being aware of it. Art education in India is witnessing a remarkable shift. Art students interact through creative expression by

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encouraging cultural literacy. The main part of art and design education is to foster imagination by expressing it in a creative manner. The study aims to determine how important it is to incorporate art education in teaching and learning for visual media students at the college level. It also aims to record what students learn in art classes and how they apply their knowledge in the digital age. The study adopts qualitative analysis through interview techniques and documents conducted with visual media students

Keywords: Art Education, Digital Learning, Digital Tools

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126 Advanced bike safety and security system

Paper ID V7I2-1450 · Pages 648-651 · Embedded

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India has one of the highest rates of motorcycle injuries. 40% of those killed and injured on Indian roads are motorcyclists. Speed is one of the basic reasons for a vehicle accident. Many lives could have been saved if the emergency service could get accident information and reach it in time. This project analyses the capability of the MPU6050 Gyro sensor to monitor the lean angle of a vehicle and detect accidents basing on monitored speed, lean angle and send accident location to an emergency contact and to a nearby hospital and police station. The abnormal condition of speed and gyro sensor will activate the GPS module when an accident occurs. GPS will send the coordinates that it receives from the satellite on a real-time basis of the vehicle via GSM module to ambulance and family members. This will help to reach the rescue service in time and save valuable human life. And also the vehicle tracking system will send you the location to your mobile phone along with the Google map coordinate. You can request the location at any time & view the location on Google Maps installed on your mobile phone.

Keywords: Gyro Sensor, GSM, GPS, Lean Angle, Vehicle Tracking

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127 Lung disease detection using deep learning

Paper ID V7I2-1467 · Pages 652-662 · Information Technology-deep Learning

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The motivation of the project is to detect five to seven lung diseases using chest x-rays. Lung diseases include Asthma, tuberculosis, pneumonia, bronchitis, Chronic Obstructive Pulmonary Disease (COPD). In addition to it, in recent days, we are all scared of the word “corona”. Though there is the screen of blood and mucus for the test, the major test to confirm covid positive is – X-RAY. A further developed version of this model will help us in the diagnosis of covid from viral_pneumonia. The model involves two modules 1. segmentation - where FC

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descent 103 is used to get the segmented masks of lung and 2. resnet algorithm is used to predict the class of the diseases based on probability voting based on the k patches acquired in every image .saliency map used in it indicates the region where the lung areas are mostly affected.

Keywords: Preprocessing, Segmentation, FC-Densenet, Classification, Resnet, Grad-CAM, Saliency Maps

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128 Drainage system analysis of Gunjavani river basin, Velhe, Pune district

Paper ID V7I2-1458 · Pages 663-668 · Arts

Sachin Kantilal Pise, Assistant Professor, Annasaheb Vartak College of Arts, Commerce, Science, Vasai Road West, Maharashtra.

Morphometry is the precise and objective measurement of landforms. Morphometry involves quantitative analysis of geometric properties of the future Strahler. A.N. (1957) describes the term morphometry measurement of the shape or geometry of any natural form. While Clarke J.I. (1970) defines morphometry as the measurement and mathematical analysis of the configuration of the earth's surface and of shape, and dimensions of the land forces.

Keywords: Drainage Analysis, Relief Analysis, Bifurcation Ratio, Length Ratio

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129 Assessment of deterioration in RCC building

Paper ID V7I2-1367 · Pages 669-678 · Civil Engineering

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Concrete is considered a durable material but it is still potentially vulnerable to deterioration unless certain precautions are taken. The assessment of concrete structures consists of not only an evaluation of the present condition but also a prediction of the cause of deterioration and its residual life. A number of tests need to be carried out to assess the extent of distress and to estimate the quality of concrete, before taking up any repair measures. This paper discusses the assessment of RCC building by using Non-Destructive Testing. The main aim of the paper is to highlight the importance and significance of different test methods employed to assess the present condition of the RCC structure.

Keywords: Cracks, Structural Distress, Structural Audit, Non-Destructive Testing, Rehabilitation

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130 Structural analysis of spanner bolt assembly

Paper ID V7I2-1417 · Pages 679-683 · Mechanical Engineering

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A spanner or span is a metallic tool whose end fits round a nut or bolt so that you can turn it to loosen or

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tighten it. Spanner is designed to grip a nut or bolt head. In this paper, Open Ended Spanner is taken into consideration for the study of structural analysis. The open-ended spanner has a U-Shaped that grips the two opposite faces of a hexagonal bolt or nut. The main aim of this paper is to evaluate the structural analysis of the Spanner Bolt Assembly. Input will be the Spanner Bolt Assembly CAD model and output will be deformation and stress plots. The CAD model and Analysis operations are performed using Catia and Ansys Workbench respectively. Structural analysis is performed on Spanner Bolt Assembly with Structural Steel material to validate Equivalent stress and Total Deformation.

Keywords: Spanner, Bolt, Catia, Ansys, Stress, Deformations

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131 Static structural analysis of split muff coupling under maximum load conditions

Paper ID V7I2-1466 · Pages 684-686 · Mechanical Engineering

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The split muff coupling is also called compression coupling. It is a rigid coupling, the main advantage of this coupling is that it runs at a heavy load with a moderate speed. In the current paper, static structural for the coupling is done using Ansys Workbench 2019 and the CAD model is created using Solidwork. This paper deals with Static Structural analysis of Split Muff Coupling under maximum torsional load condition. Static Structural is much needed and monitoring that for maximum loading conditions for Split Muff Coupling approach can be used for prophecy purpose.

Keywords: Ansys, Coupling, Workbench, Split Muff Coupling, Static Structural

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132 A review on molecular methods in the detection of foodborne pathogens

Paper ID V7I2-1497 · Pages 687-693 · Microbiology

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Food safety is a major healthcare concern globally. Foodborne pathogens are held responsible for the elevated incidence of foodborne diseases worldwide, which also has an economic impact more so in developing countries. For these reasons, it is crucial to supply food that has undergone testing and is safe for consumption. Initially, testing for pathogens solely relied on culture-based methods; which turned out to be time-dependent and labor-intensive. Identification of pathogens in a short time with standard accuracy stood as a challenge. After decades of research, rapid detection methods were developed to ensure food safety at an industrial level. Rapid techniques comprised of nucleic acid-based methods like PCR, multiplex PCR, nucleic acid sequence-based amplification (NASBA), loop-mediated isothermal amplification (LAMP), and DNA microarray; immunological-based methods like enzyme-linked immunosorbent assay (ELISA) and lateral flow immunoassays and optical, electrochemical, and mass-related biosensor were the popularly used methods. DNA markers were also commercially available for the detection of the target organism in the sample. The main purpose to devise these molecular techniques was to provide rapid, highly sensitive, and specific results

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while being economically convenient. This report summarizes the existing molecular methods and improvements that were made over the years for the detection of foodborne pathogens.

Keywords: Foodborne Pathogens, Food Safety, Molecular Methods for Detection, Conventional Methods, Culture Based Methods, Nucleic Acid Based Methods, Immunological Based Methods, Biosensors, Markers

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133 Analysis of toggle Lever with the help of FEA in Ansys

Paper ID V7I2-1500 · Pages 694-697 · Mechanical Engineering

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The subject of this project is the analysis of Toggle Lever. Toggle lever is used in pneumatic parts which are used to restrict the air supply as well as is used to locate the cylinder parts. In this paper, we modeled a 3D geometry of the Toggle lever using Catia v5R21 and performed structural analysis on Ansys 2021 R1. We have done a comparative analysis with the structural steel material of the toggle lever. Finite element analysis (FEA) is software from Ansys that gives users the ability to automatize and design or customize simulations. FEA uses mathematical models to understand and quantify the effects of physical phenomena like forces, vibration, deformation, pressure, heat, and other physical properties affecting the simulations, thus reducing the needs of prototypes. Basically, finite elements are a method which divides the large problem into smaller one with the help of static structural in the finite elemental analysis, we can calculate deformation, stress, strain, and other values. FEA helps us to tell at what maximum and minimum value the deformation is taking place so that we can conclude at the particular value the product is going to break or bend. In this paper, static structural analysis is done on the toggle lever by changing the elemental order such as linear and quadratic are used by interchanging the span angle center which is coarse, and fine. It was observed that there was a difference in values of nodes and elements changed by corresponding linear and quadratic element order with coarse and fine span angle center. It resulted that the number of nodes was greater in quadratic element order than in linear element order. In the static structural analysis, we observed that the element order having more number of nodes gives maximum deformation, stress, strain compared to the element having less number of nodes. Thus, quadratic element order gives maximum values and accurate results as compared to linear element order.

Keywords: Toggle Lever, Ansys Workbench, Static Structural Analysis, Mesh, Span Angle Centre, Element Order

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134 Bioplastic from Banana Peel

Paper ID V7I2-1480 · Pages 698-702 · Biotechnology

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Plastics play a major role in several industrial applications owing to their properties such as elasticity (plastikos-

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elasticity), cheap availability, durability, convenience in packaging, and various other features. However in current times; its usage has posed severe irreversible threats to the environment and its species owing to its non-biodegradable nature. The development of bioplastics and their commercialization has thus become the need of the hour. The ideology of producing bioplastics from agro-based wastes proves to be an innovative solution to the aforementioned issue. This article reviews the production of bioplastic from banana peel via various methodologies and its applications. The additives used for its production and the testing methods revealed that the end product met all standard requirements to act as a replacement for synthetic plastic.

Keywords: Plastic, Biodegradable, Banana Peel, Bioplastics

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135 Framework for slicing 6G networks for efficient multi-tenancy

Paper ID V7I2-1354 · Pages 703-708 · Computer Engg

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6G Networks are going to be the reality in near future and are going to be used in all walks of life for multiple purposes. The network slicing facilitates optimum usage of the network resources cost-effectively by the service providers and major consumers. In this paper, prevailing slicing methodologies were analyzed and a better and efficient Artificial Intelligence-based Network slicing framework is presented, for use in the upcoming 6G communication network technologies.

Keywords: Artificial Intelligence, 6G Communications Framework, Network Function Virtualization, Software Defined Network, Slicing

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136 XML based UI designer using C++

Paper ID V7I2-1491 · Pages 709-711 · Computer Engineering

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The application aims for generating a Graphical User Interface (GUI) from XML-based documents. Within the application, display components for building a GUI are defined, also a layout hierarchy will be describing the layout relationships between the displayed objects, specifying how relative these display components are on a layout window in the GUI. The appearance of display objects within the GUI may also be altered which are humanly readable that makes debugging relatively easy. So, this is an application wherein the XML files can be read, modified, and also be extended to contain new information without breaking existing implementations. Most significantly, describing interfaces as structured documents allows efficient reuse of composite UI objects. Thanks to this manipulation and storage, users can create and customize interactive layouts.

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Keywords: XML, TinyXML, UI layout, Parsing, Modified, GUI

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137 Effectiveness of information, education and communication package in terms of knowledge regarding management of selected side effects of chemotherapy among patients with cancer undergoing chemotherapy

Paper ID V7I2-1502 · Pages 712-714 · Medical Surgical Nursing

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A quasi-experimental research design was adopted to evaluate the effectiveness of the Information, Education, and Communication Package in terms of knowledge regarding management of selected side effects of chemotherapy were selected through a convenient sampling technique. The mean post-test score of knowledge among the experimental group was 19.81 (±2.46), whereas in the control group it was 13.53 (±3.66) that there was a significant difference (P

Keywords: Effectiveness, Information, Education and Communication Package, Management of Selected Side Effects of Chemotherapy

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138 Strategies to improve classroom discussions

Paper ID V7I2-1503 · Pages 715-720 · Others

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Classroom participation by students is very important for learning effectiveness. However, the participation of all students in classroom discussions is not always there. This can be attributed to several factors. The factors are both individual and contextual. This paper discusses the reasons for poor classroom participation and discusses strategies to improve classroom discussion, which ultimately leads to effective learning and development of confidence and communication skills in students and helps to have meaningful and interesting classes. This paper also discusses the pitfalls that need to be taken care of by the instructor.

Keywords: Classroom Discussion, Effective Learning, Strategies for Classroom Discussion

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139 Modeling, assembly, and static structural analysis of a cotter joint

Paper ID V7I2-1409 · Pages 721-726 · Mechanical Engineering

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The objective of this project is the calculation of dimensions, modeling, Assembly, and Static Structural analysis of the cotter joint. A theoretical method is used here to calculate the dimensions. The modeling and Assembly are done in Catia V5R20 and Static Structural analysis in Ansys 2020R1. While doing the static structural analysis more focus is given on generating the most efficient mesh and the comparison of results with respect

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to four different types of mesh is done. Here the parameters evaluated and compared are Equivalent (Von-Mises) Stress, Shear Stress, and Total Deformation. The analysis of the cotter joint is done for the tensile loading with one end kept as fixed support.

Keywords: Cotter Joint, Theoretical Design, CAD Modeling, Meshing, Static Structural Analysis

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140 Effects of fly ash on the properties of self-compacting concrete

Paper ID V7I2-1348 · Pages 727-782 · Structural Engineering

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Worldwide, Concrete is one of the most popular construction materials, because its raw material can be easily available at different places around the world. These facts have not only led to many inventions in the field of concrete but have also led to many studies in order to improve its quality, reducing the cost of implementation, and make the concrete friendly with the environment. The problem with the accepted compaction of concrete and durability are the main subjects under consideration. To achieve both of these skilled labor and advances equipment are required. currently, It seems to be the lack of the numbers of skilled workers for the construction industry is the main reason for a decrease in the quality of construction work. One solution for the achievement of durable concrete structures is the use of self-compacting concrete, which can be compacted into every corner of a formwork, completely by means of its own weight and without the need for vibrating compaction. This means that it can be gained sustainable concrete structures and acceptable compaction by using the minimum number of workers and equipment. Moreover, the use of SCC is also implemented to provide economic, social, and environmental benefits over conventional vibrated concrete construction. Fly ash is the mineral admixtures means pozzolanic material. Pozzolanic materials are siliceous or siliceous and aluminous material, chemically reacts with calcium hydroxide liberated on hydration process at ordinary temperature to form compounds possessing cementitious properties. Fly ash is the most widely used pozzolanic material all over the world. Fly ash is a finely divided residue resulting from the combustion of powdered coal. The new Indian Standard on concrete mix proportions (IS 10262-2009) is already incorporated fly ash as supplementary material to cement, by replacing cement with a material of pozzolanic characteristics such as fly ash. It is used to partially replace Portland cement up to 60% by mass. Fly ash is waste from generated power plants. One of the practical solutions to economize cement is to replace cement with supplementary cementitious materials like fly ash. The use of fly ash as concrete admixtures not only extends technical advantages to the properties of concrete but also contributes to environmental pollution control. India is a resourceful country for fly ash generation with an annual output of over 110 million tonnes, but utilization is still below 20% in spite of the quantum jump in the last 3-4 years.

Keywords: Self Compacting Concrete, Superplasticizer, Fly Ash, Cement, Water, Sand

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141 Peak-to-average power ratio and bit error reduction in OFDM system

Paper ID V7I2-1344 · Pages 783-785 · Mobile Communication

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Wireless communication is one of the significant features of modern communication systems. In next-generation wireless communication, orthogonal frequency division multiplexing (OFDM) is one of the most commonly used radio access schemes because of its low symbol rate and affinity to different transmission bandwidth arrangements. This system we are currently using as a radio access technique in the latest cellular communication system as long-term evaluation (LTE)in the 3 GPP (3rd Generation Partnership Project) wireless communication. Nevertheless, the peak-to-average power ratio of the OFDM signal is a significant drawback as it restricts the efficiency of the transmitter. high peak-to-average power ratio (PAPR) is the major drawback in the OFDM systems it causes a nonlinear distortion in transmitted OFDM signal when it travels through a nonlinear amplifier. In this paper, we are discussing problems in the OFDM system i.e. Peak to Average Power Ratio also called PAPR. It affects the performance and efficiency of power amplifiers, Different algorithms have been developed to overcome PAPR viz. clipping, SLM (Selective Mapping), PTS (Partial Transmit Sequence), and the overall analysis of different techniques.

Keywords: OFDM, Problems in OFDM, PAPR, BER Reduction Techniques

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142 Billboards prediction using listeners' perspective and audio features from top music platforms

Paper ID V7I2-1499 · Pages 786-789 · Information Technology

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Musichas been a form of entertainment for many years. The music industry is constantly putting forth the effort to improve the quality of our music. It would be an interesting exercise to predict that the song makes it into top charts from a mathematical perspective. The proposed model in this paper predicts the success of a song based on its audio features and listeners' perspective factors that will be of great help to music producers. Violating the features of the song to predict whether the song will be hit before it is released can greatly help producers to increase their profits and reduce the risks they take inproducing songs. The audio features can be processed using machine learning algorithms like Logistic Regression, Support Vector Machines, Random Forest, Naive Bayes Classifier and patterns may be identified in the processed data, which can finally be combined with listeners' perspective features to effectively predict hit songs.

Keywords: Machine Learning, Billboards Charts, Spotify Web API, Audio Features, Supervised Learning

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143 Universalization of girls' education– A case study on Keshpur Village of Paschim Medinipur district in West Bengal

Paper ID V7I2-1488 · Pages 790-793 · Social Science

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Education particularly primary education needs to be stressed and special emphasis must be laid on girl's education. It was brought out that to realize this goal no effort is being spared. Every care has to be taken to promote universalization of primary education by launching several schemes and programmes like setting of more number of primary schools, appointing more number of teachers, with due emphasis and equity of women teachers maintaining favourable teacher-pupil ratio etc., and programmes like operational blackboard, DEPEP etc., and in addition providing incentive, like free clothing, midday-meal etc., to offset the obstacle of poverty. However, their perception and attitudes with regard to "education", is different from that of the programmes that are being launched. We wish to examine this issue in the present study in the context of artisans (weavers) at a village setting in a chronically drought-prone district of West Bengal.

Keywords: Universalization, Education, Women, Poverty Eradication

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144 Seismic resistive design for tunnel approach – A case study of Rohtang region

Paper ID V7I2-1440 · Pages 794-797 · Civil Engineering

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Modernization demands enhanced infrastructural development in every corner of any nation. The integrated road network in the hilly area itself is a big challenge. Construction of tunneling projects tends to increase the road network connectivity in hilly terrain. This improves traffic capacity, which enables frequent mobility of transport systems. A case study of vulnerable tunnel approach passing through tectonically active multi-folded rock mass of young mountains in Rohtang region has been discussed. An estimated 8.8 km long Rohtang tunnel (NATM tunneling) was proposed passing through a diversified geological sequence of uniform dipping rocks having quartzite, quartzitic-schist, and quartz-biotite schist with a thin band of phyllites creating high-stress flow due to overburden. Deep-seated complex failure has been observed at this location. Tunnel squeezing and rock bursting occurred due to explosion, redistribution of elastoplastic pressure during tunneling works. The jointed rock is having an NW-SE joint strike with 220/35° dip direction having three joint sets. In this case study, stability of around 200 m of affected scarp zone has been addressed using the FEM technique. Mohr-coulomb and Generalized Hoek- Brown parameters have been defined for overlying mass and underlying weathered, jointed bedrock strata respectively. Squeezing and exceeding tangential stresses at the periphery of tunnel area as compared to unconfined strength of near lying disturbed rocks resulted in a high concentration of stresses at tunnel approach. Considering all these aspects, micro piles are used at intermediate levels below the road level with pre-stressed cable anchors at the tunnel passage level. Consequently, an increase in strength reduction factor of 98 percent and 80.9 percent has been observed under static and seismic conditions respectively. Control of massive displacement is a major concern for this

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critical location. FEM analysis shows that stress displacement vectors have been controlled up to 84 percent using stabilization techniques of cable anchors and micro piles.

Keywords: Cable Anchor, Generalized Hoek Brown, Micropile, Mohr-Coulomb, Multi folded, Tunnel Approach

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145 Paper battery: An ecofriendly solution

Paper ID V7I2-1490 · Pages 798-801 · Electrical Engineering

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The Major disadvantage of lithium-ion batteries is they are toxic and also produce E-waste which affects the environment. The release of such chemicals through leaching spills or air emissions can harm communities, the ecosystem, and food production. Besides, lithium extraction hurts the dirt and causes air tainting. According to the Environmental Protection Agency (EPA), the US alone throws away more than three billion batteries each year, above information give the idea of how important to find the replacement of toxic lithium-ion batteries by non-toxic batteries, i.e. Paper battery. Also, they are occupied more space as compare to paper batteries. The weight of traditional lithium-ion batteries is more than paper batteries. Our paper gives a brief idea of the replacement of toxic lithium-ion batteries with eco-friendly paper batteries. A paper battery is an adaptable, super slim energy stockpiling and creation gadget shaped by joining carbon nanotubes with a customary sheet of cellulose-based paper. Being Biodegradable, Lightweight, and Non-poisonous, adaptable paper batteries have expected versatility to power the up-and-coming age of hardware, clinical gadgets, and mixture vehicles, considering revolutionary new plans and clinical advances.

Keywords: E-Waste, Paper Battery, Nanotube, Cellulose

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146 How can the Houthi ethnic supremacy beliefs undermine the social and political stability in Yemen?

Paper ID V7I2-1433 · Pages 802-813 · Social Science

Hesham Alziady, Research Scholar, Istanbul Aydin University, Istanbul, Turkey

As the breaking out of the war in Yemen occurred because of the coup made by the Saleh-Houthi alliance in 2014, the world began to show more attention to Houthis as a Zaydi religious group. But, in order to understand Houthis in-depth, it is quite important to study its historical, social, and religious roots, try to decode its complexities. This paper aims to analyze historically Houthis in its anthropological roots of Zaydi-Hashimism. The paper also studies the ethnic superiority in the Houthi' beliefs using the theoretical frame of ethnocentrism. As well as it examines if these beliefs contribute to the Yemeni social and political instability since the first Jarudian Zaydi state has been established in Yemen thousand years ago. In addition to that, the paper studies the new phenomenon of Aqyal as an anti-Hashemite movement, and if it is an extension of the

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national liberation movements that struggled against Imamate in the past. It examines if the Aqyal as a national movement can increase its popularity in the future.

Keywords: Al al-Byet, Al-Rassi, Aqyal, Ethnocentrism, Hashemite, Houthis, Nationalism, Yemeni War, Zaydism

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147 Study of the impact of mesh size for static structural analysis of motorcycle wheel

Paper ID V7I2-1509 · Pages 814-819 · Mechanical Engineering

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Mesh size has a significant effect on finite element analysis of Motorcycle Wheel. The purpose of this study is to analyze those effects in detail and study their impacts on the results of static structural analysis of the Motorcycle Wheel. The importance of the wheel in the automobile is obvious. The vehicle may be towed without the engine but at the same time, even that is also not possible without the wheels, the wheels along the tire have to carry the vehicle load, provide a cushioning effect and cope with the steering control. Generally, wheel spokes are the supports consisting of a radial member of a wheel joining the hub to the rim. The most commonly used materials for making Wheel spokes are with features of excellent lightness, thermal conductivity, corrosion resistance, characteristics of casting, low temperature, high damping property, machine processing, and recycling, etc. This metal's main advantage is reduced weight, high accuracy, and design choices of the wheel. This metal is useful for energy conservation because it is possible to recycle. Spokes make vehicles look great but at the same time, they require attention in maintenance.

Keywords: Mesh, Finite Element Analysis, Motorcycle Wheel, Static Structural Analysis

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148 Employee attrition prediction using machine learning

Paper ID V7I2-1471 · Pages 820-825 · Computer Science And Engineering

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Nowadays, Employee Attrition Prediction becomes a major problem in organizations. Employee Attrition is a big issue for organizations especially when trained, technical and key employees leave for a better opportunity from the organization. This results in financial loss to replace a trained employee. Therefore, we use the current and past employee data to analyze the data for employee attrition. For the prevention of employee attrition, we applied a well-known classification method named the Random Forest method on Kaggle’s data set. For this, we implement a feature selection method on the data and analyze the results to prevent employee attrition. This is helpful to companies to predict employee attrition, and also helpful to their economic growth by reducing their human resource cost.

Keywords: Attrition, Random Forest, Kaggle Data Set

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149 Brain tumor detection and classification using convolutional neural network

Paper ID V7I2-1496 · Pages 826-831 · Data Science

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Brain tumors can cause cancer if not detected and diagnosed at early stages. Currently, Brain tumor detection and classification is done by performing Biopsy which is a very time-consuming process. Improvement in technology and Machine learning algorithms can help radiologists in tumor diagnostics in less time and effort. We propose a model that would first segment the MR image and identify the presence of tumor in the brain and if detected then a deep learning-based CNN architecture that would classify the tumors in MRI images into Benign and Malignant tumors and act as a strong base for the staff to decide the curing procedure. The development of the model will be divided into training and testing phases and would be tested using multiple databases and different methods. Having achieved high accuracy, reliability, and execution speed, the developed CNN architecture would act as a strong decision-supportive tool in medical diagnostics for radiologists.

Keywords: CNN, Brain Tumor, Fuzzy C-Means, Gaussian Filtering, Benign, Malignant, Skull Stripping, Brats, Neural Network

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150 Design and analysis of aircraft landing gear

Paper ID V7I2-1437 · Pages 832-838 · Mechanical Engineering

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The landing gear is a vital structural unit of an aircraft that enables it to take off and land safely on the ground. A variety of landing gear arrangements are used depending on the type and size of an aircraft. Nowadays we can see that majority of failures of aircraft structure take place because of the malfunction of the landing gear system solely. This work is mainly focused on structural design and analysis of the main landing gear for an aircraft, that is economical and possesses a high strength to weight ratio but still simple in design. A typical landing load case will be assumed for which structural analysis will be carried out. During landing, there will be three different types of loads: 1. Vertical load (Compressive Load) 2. Drag load 3. Sideload Drag load and sideload values are terribly tiny in comparison to compressive load. So we will be focusing on the Vertical load. So we have taken the standard landing gear of an aircraft and it is designed by using Solid-works 2019 and analyzed for structural safety using ANSYS 19.2 software. The maximum possible load is given as design load. The landing gear assembly is analyzed for the traditional metallic materials like Aluminium Alloy-AlSI1030 Carbon Steel, Structural Steel IS2062 Fe440, and Titanium Alloy-Ti-8Al-1Mo-1V using ANSYS software and by comparing the results obtained by the mentioned material the best suitable material will be concluded that

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may be considered as best suitable and safer material.

Keywords: Landing Gear, Total Deformation, Aircraft Landing Gear, Ansys 19.2, Stress Analysis, Deflection Analysis

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151 Education and women empowerment in India

Paper ID V7I2-1297 · Pages 839-841 · Political Science & Public Administration

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Education is one of the most creative means of empowerment. It helps a person to realize his or her potential in a social group to achieve higher social mobility and the state to maintain good social order. Empowerment through education can also be dealt with by following a capabilities approach. Being an important component of developing capabilities, education has an intrinsic role to play in developing freedom and leaving the rest to be attained through institutional and legal means. Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. Universal high-quality education is the best way forward for developing and maximizing India`s rich talents and resources for the good of the individual, the society, the country, and the world at large. India will have the highest population of young women in the world over the next decade, and our ability to provide high-quality educational opportunities to them will determine the future of their progress, development, and empowerment.

Keywords: Education, Empowerment, HDR, Women

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152 A comparative analysis of machine learning techniques for automatic text classification

Paper ID V7I2-1523 · Pages 842-849 · Computer Science

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Text processing and its related activities have reached their peak demand in the present days due to the increase of unstructured data. The underlying structure in any text can be derived through categorization techniques. The capacity of text classification algorithms to perform the conversion from structured to unstructured data is the key factor in all text processing activities. To further enhance this, many concepts from other disciplines such as statistics, physics, and mathematics were tailored to suit the needs of text analyzing pipelines. Text classification techniques help to build the template necessary for extracting meaningful information. Hence, this paper undertakes a study of comparison on various text classification algorithms to reiterate their suitability for particular classes of problems. The algorithms such as 'Naïve Bayes', 'Support Vector Machine', 'K- nearest neighbor', and 'Decision Tree' were studied based on empirical analysis with

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respect to the WEKA data analysis platform. From the experimental results, it is seen that the strength of algorithms depended on the data type, nature of attributes, and representation of the classes. This is verified by various accuracy metrics used in the study such as precision, recall, accuracy, F1- scores, and ROC values.

Keywords: Naive Bayes, Support Vector Machine, Decision Tree, Text Classification, WEKA, J48, Automatic Text Mining, IBK

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153 Enhancement of heat transfer using perforated fin

Paper ID V7I2-1522 · Pages 850-853 · Mechanical Engineering

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In many engineering applications, extended surfaces referred to as fins are used to enhance convective heat transfer. The problem of forced convection heat transfer for perforated fins was investigated in this work. An experimental study was conducted to investigate the heat by forced convection transfer in a rectangular non-perforated fin and circular perforated fin. The investigation is conducted to compare the heat transfer rate of two different fins one is with circular perforation and another one is without perforations. The work done on various kinds of fins, the effect of perforation shape or geometry on the heat transfer was simulated in ANSYS 17.2 to work out the simplest type of fin to be used. The parameters which were considered are the thermal properties of the fin and perforations. The study takes into account the gain in fin surface area and the extent of heat transfer enhancement due to perforations. The comparison between experimental results and software results of the kinds of fins perforation was analyzed for the heat transfer coefficient to clarify the simplest perforation shape for the specified application.

Keywords: Fins, Circular Perforation, Forced Convection, Simulation, Ansys 17.2, Experimentation

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154 Test crosses evaluation for identification of maintainer and restorer lines in hybrid rice breeding programme

Paper ID V7I2-1475 · Pages 854-858 · Agriculture

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The study was conducted to identify potential maintainers and restorers in developing rice hybrids through a three-line system. During Kharif 2018 six established CMS lines were crossed with 34 elite lines and 87 F1s were evaluated during 2019 in test cross nursery. Among these 49 genotypes recorded effective the

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restorability with more than 75% spikelet fertility, 9 genotypes recorded partial fertility with 50-75% spikelet fertility, 3 genotypes were partial maintainers with 1-50% spikelet fertility, and 25 genotypes as maintainers with 100% pollen sterility. In the present study, high frequency of restorers (56%) was observed than maintainers (29%). The genotypes NTCN1, NTCN 31, and NTCN 93 can be used for the development of new CMS lines through recurrent backcrossing programme and other potential restorers like NTCN 2, NTCN 3, NTCN 18, NTCN 19, NTCN 31, NTCN 33, NTCN 58, NTCN 78, NTCN 79, NTCN 80, NTCN 85, NTCN 97, NTCN 98, NTCN 101, NTCN 102, NTCN 103, NTCN 104, NTCN 105, NTCN 109, NTCN 111, NTCN 115, NTCN 113, NTCN 116, NTCN 118 and NTCN 119 can be used for developing early to medium duration hybrids in rice.

Keywords: Hybrid Rice, Pollen Fertility%, Spikelet Fertility%, Maintainers, Restorers

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155 Structural health analysis and monitoring of RC jetty structure and rehabilitation methodology

Paper ID V7I2-1514 · Pages 859-862 · Civil Engineering

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Jetty is the interface between the land mode of transportation and the waterways mode of transportation. The structural deterioration of jetty structure depends upon various parameters such as their exposure conditions, oceanographic conditions, salinity, ballast water contamination, wind velocity, and its direction. Jetty structures are subjected to dead load, live load, earthquake load, and additional marine loads like current load, wave load, berthing load, and mooring load. The present study is carried out to suggest the most appropriate rehabilitation measures or repair methodology by inspecting, analyzing, and monitoring of RC jetty structure. The inspection reports and NDT test results help to find the extent of the spread of damages and level of deterioration of the jetty structure.

Keywords: Berthing Load, Mooring Load, NDTs, Rehabilitation

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156 Electronic healthcare records

Paper ID V7I2-1507 · Pages 863-864 · Computer Science And Medical

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In this digital era, everything is being computerized or being made electronic, or being automated. Keeping this change in mind many industries and services were made online and automated while all the industries are computerized and automated at a fast pace the medical industry, and its services are lagging back in this change. Keeping this change in mind the electronic healthcare records (EHR) are made. EHR is the electronic

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version of patient medical records, which are more portable and efficient.

Keywords: EHR Electronic Health Record, EMR Electronic Medical Record, MRS Medical Record System, Computer-Based Patient Record (CPR), Database, Hospital, Management System, Patients, Records, Personal Health Record (PHR)

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157 Comparative study of effect of different types of mesh refinements on static analysis of car wheel RIM

Paper ID V7I2-1504 · Pages 865-870 · Mechanical Engineering

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Rim is one of the parts of the wheel on which the tire is mounted and it is connected to the hub. Different materials are used for manufacturing the rim such as Aluminium alloy, Magnesium Alloy, etc. The aim of this paper is to evaluate and compare the result of Static Analysis of different materials with respect to the different types of refinements on a Car Wheel Rim. Modeling and Analysis are done in Catia V5 and ANSYS respectively. Static Analysis with different mesh refinements to be done on the Car Wheel Rim of different materials to validate the best material used for the car wheel rim.

Keywords: Catia V5, Ansys, Wheel RIM, Static Analysis, Mesh Refinement

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158 Performance evaluation of artificial neural network in parameter estimation of infiltration models on a clay soil

Paper ID V7I2-1456 · Pages 871-876 · Water Resources Engineering

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In the present study, attempts have been made to predict the soil infiltration rate by using the Kostiakov infiltration model. Subsequently, the feedforward backpropagation Artificial Neural Network (ANN) was employed to evaluate the constants of the Kostiakov infiltration model. The double ring infiltrometer approach was employed for collecting the infiltration test data. Infiltration tests were carried out for winter and summer seasons on 106 observation points, over the study area. The parameters of the infiltration model stated above are determined along with this data for different soil properties like bulk density; moisture content; % sand; % silt; % clay; electrical conductivity; field capacity; and wilting point which were determined by experimentation. These data serve as input to the ANN and the parameters of the Kostiakov model were determined. The performances of ANN models with the different input combinations are evaluated for the prediction of the Kostiakov model parameters on clay soil. The performance of the ANN was assessed based on various evaluation criteria. The Nash-Sutcliffe efficiency was observed to be 93.79% and 97.71% for model parameters ‘a’ and 'b' respectively. Thus, the study demonstrates the application of ANN for the evaluation of infiltration characteristics of clay soil obviating the need for carrying out tedious field experimentation.

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Keywords: Infiltration, Artificial Neural Network, Infiltration Models, Modified Kostiakov Model, Kostiakov Model, Clay Soil

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159 Stock price prediction using machine learning models in python

Paper ID V7I2-1525 · Pages 877-879 · Machine Learning

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The project aims to provide retail investors with Machine Learning models to navigate through the stock market. This is achieved through the use of machine learning and Python. Several stock price prediction approaches and models are developed including Recurrent neural networks i.e. LSTM, simple linear regressions, and Decision Tree Models. By taking the past stock prices the models were trained and tested on that data to predict the stock prices.

Keywords: Stock Price, Machine Learning, Linear Regression, Decision Tree, LSTM, RNN, Artificial Intelligence

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160 A review on the impact of mobility patterns and prediction on Covid-19 rates

Paper ID V7I2-1389 · Pages 880-882 · Information Technology

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After the outbreak of COVID-19 several prediction models are being used by authorities and officials all over the world to implement appropriate control measures and to make well-informed decisions. Due to an enormous level of ambiguity and shortage of crucial data, conventional models have shown low efficiency for long-term prediction. A coronavirus is a contagious disease that is resulting in the massive growth of COVID-19 cases, therefore, we have used human mobility patterns as the effective factor to take preventive measures to thereby stop the outbreak. In this model, we have used methods such as exponential growth, and prophet models. We here demonstrate the impact of changes in mobility patterns by binding the data in Data Science to efficiently trace the disease, plan strategies, methods and foretell the future growth of the pandemic.

Keywords: Covid-19, Prediction, Mobility, Lock-Down, Case

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161 Internet of Things Based Smart Society

Paper ID V7I2-1531 · Pages 883-891 · Internet Of Things

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Internet of Things (IoT) is a fledgling and popular technology, which has given the provision to people for doing daily work like, at just a click or on command. The Internet of Things has helped develop many amazing Things like the smart street where streetlight gets automatically switched on or off with the help of sensor data. Well-sensor is a crucial factor in the field of Internet of Things applications. The great developers and people from the industry are working continuously to develop a system that will help sectors like healthcare, agricultural, industrial, construction, etc. A lot of researchers do research on the Internet of Things as a part of the interest and as a result, they end up developing amazing and unique systems. This paper produces a summary of the Internet of Things system named “Smart Society” which consists of 5 unique modules which are Smart Street Lighting, Disaster Management System, House Safety, Smart Gardening and Healthy Environment. In the further part of the paper, the components and the software systems are discussed which have been utilized to develop this model, and at last, the challenges and future scope of the “Smart Society System”.

Keywords: Internet of Things, Megatron Board, USBasp, Light Dependent Resistor, IR Flame Sensor, Moisture Sensor, Water Level Sensor, IR Proximity Sensor

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162 Machine Learning Algorithms to Predict Next Day Rain in Australia

Paper ID V7I2-1543 · Pages 892-894 · Machine Learning

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This paper predicts whether it will rain the next day or not in Australia. This paper compares 4 machine learning algorithms namely Random Forest Classifier, XGBoost, Light GBM and Logistic Regression models by training and testing them with the data set. The XGBoost Model performed the best when compared to Random Forest Classifier, Logistic Regression and LightGBM. XGBoost produced an accuracy of 94.03%. The models could have performed better if the date was treated as a cyclic continuous feature because the weather itself is cyclic which shows a similar trend during the same seasons.

Keywords: Weather Prediction, Random Forest Classifier, Logistic Regression, Light GBM, Machine Learning.

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163 Biochemical analysis of Siddha mono herbal drug Amukkara Podi(Amukkara Karpam)

Paper ID V7I2-1554 · Pages 895-897 · Medicine

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Siddhar Yogam or Siddhar Yoga Muraigal are the ancient methods that were advocated by the Siddhars in order to prevent the ailments occurring due to human aging. Also, these methods consisted of physical, mental, and even dietary practices, that must be practiced for a period of a mandala (48 days). The dietary practices, that were advocated by them are the ‘Kaayakarpam’ practices. These usually include the intake of a certain poly or monoherbal drug, for a stipulated span of time. They may either be the drug of choice for general body wellness, or for a specific disease. Considering Amukkara Podi (the powdered root of Withania Somnifera), it has several references as a Kaayakarpam[1] drug for general body wellness. As a special drug, it acts wonderfully towards weight loss for obese patients, when taken in with honey. Obesity[2] or being obese is a health disorder that is characterized by the presence of a BMI of more than 25. These patients tend to be overweight, have a lethargic attitude or a condition of tiredness towards work, and at later stages may suffer from knee, hip pains, etc. Obesity has also been considered to be an uprising health disorder of concern by WHO. The treatment generally includes rigorous exercise in order to lose bodyweight. In cases where obese individuals cannot lose weight through exercise, other options could be taken into consideration. One among them is the intake of Amukkara Podi with Honey. This paper reports the biochemical analysis of the drug, ‘Amukkara Podi’, which could be used as a forerunner for the usage of the drug against obesity.

Keywords: Amukkara, Obesity, Kaayakarpam

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164 JavaScript attack detection using machine learning

Paper ID V7I2-1547 · Pages 898-901 · Computer Engineering

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JavaScript-based attacks have become one of the most common and successful types of attack. Existing techniques for detecting malicious JavaScripts could fail for different reasons. In this project, we propose an efficient method of detecting previously unknown malicious activity using an interceptor at the client-side. In this, we are using a machine-learning algorithm to detect JavaScript attacks. The interceptor monitors thetraffic exchanged between the browser and server and extracts the real-time traffic features needed for XSS detection. Supervised machine learning classifiers such as k- NN, Support Vector Machines, Gaussian Naïve Bayes, and Logistic Regression are used on a dataset gathered for achieving high accuracy in webpage classification through learning from patterns. The experimental results obtained, show that this method can efficiently classify malicious code from benign code with promising results.

Keywords: Countvectorizer, Tdidfvectorizer, Train_Test_Split, Word_Tokenizer, Wordnet Lemmatizer

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165 Designing smart and secure ATM card for multiple bank accounts

Paper ID V7I2-1530 · Pages 902-905 · Electronics And Communication Engineering

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This project's main objective is to integrate multiple bank accounts into one single smart card. Many banks charge ATM usage fees from the customers for different transactions. At present day, every customer has an individual ATM card for each and every bank in which he/she maintains an account. So, while handling the cards, many passwords are involved. In order to overcome these difficulties, we embedded more than one bank account of the user in a single ATM smart card, therefore letting the user swipe the card so that the respective individual can select the bank from which he/she is interested to carry out the transaction.

Keywords: Security, 12-Digit RFID, Biometrics, GSM Module

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166 Obtaining lubricants using polycarbonate plastic substrate

Paper ID V7I2-1541 · Pages 906-908 · Environmental Engineering

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Oil spill contamination takes an effective role in Marine life, wherein inland and waters all over the world. It takes place in an effective way due to the usage of oil where oil is used and delivered. Where this oil usage is also taking place in Marine transportation like ships and boats in motion of ships. There is a chance of oil spillage in oceans and lakes in some conditions like a failure of the engine, failure of any motor devices. This

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creates an impact on animals and plants which depend on Marine sources, also affects human life. Hence it influences the whole life chain by the cause of oil spillage. So the reduction of oil spillage is difficult and somewhat impossible. So we planned to remove spilled oil from oceans and lakes by using foam board sheets and polycarbonate plastic substrates. This project helps us to achieve purity in water and creates a balanced Marine environment.

Keywords: Oil Spills, Environment Impact, Oil Pollution

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Pillars of the new education policy 2020

Paper ID V7I2-1524 · Pages 909-914 · Sociology

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Education has long been recognized as a critical component of development. It is widely acknowledged as a critical component of individual and societal empowerment. The New education Policy 2020 aims to revise and update our country's education system, including its rules and governance, by making both school and college education more comprehensive, versatile, and multidisciplinary, in line with the 2030 Agenda for Sustainable Development. The aim of the present paper is to review the Four Pillars and their Importance in New Education Policy 2020. These NEP pillars are the steps that schools should take to implement changes and prepare their school to become a smart school and an institution that is ready to participate actively in this revolution. It believes that the goal of education is to produce good people who are capable of critical thinking and action, compassion and empathy, courage and endurance, scientific temper and imaginative imagination, and ethical moorings and values of the foundational pillars of the New Education Policy 2020. Its goal is to produce active, efficient, and contributing people who will help to create an equal, inclusive, and plural society as our Constitution envisions. The present study incorporates secondary data for an in-depth investigation and achieves the objectives of the study. The collected data were analyzed critically on the basis of the result of the other published study of pillars of the New Education Policy 2020. NEP 2020'S Four Pillars are the measures that schools should take to introduce reforms and prepare their school to become a smart school and an organization that is ready to participate actively in the revolution. Critical thinking and imagination will be integrated into the curriculum. According to the Anjani Chaand study published on April 10, 2017, Mr. Prakash Javadekar, Minister of Human Resource Development, recently unveiled the five pillars or foundations of the New Education Policy. All of these pillars are critical to the NEP (New Education Policy), as the country needs a value-added education system that includes sports and Yoga, which is now widely recognized around the world.

Keywords: Access, Accountability, Affordability, Policy, Pillars

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168 Automatic hand sanitizer with temperature sensing

Paper ID V7I2-1544 · Pages 915-918 · Electronics Engineering

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The automatic hand sanitizer and temperature sensing system design is an important system required in today's COVID -19 pandemic. The system is automatic which helps people to get sanitized without touching the machine system. The temperature sensor senses the body temperature of the people which helps to recognize people having high temperature than the normal body temperature.

Keywords: Automatic Hand Sanitiser, Arduino, Ultrasonic Sensor, Infrared Thermometer, COVID 19

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169 Linear least square approach for the acquisition of the undistorted surface EMG signal

Paper ID V7I2-1532 · Pages 919-923 · Electronics & Telecommunication Engineering

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In general electromyography (EMG) is used to find the activity of muscles. When we want to extract accurate information, it is required to record clean and undistorted electromyography (EMG) signals. Generally, when EMG is recorded of some specific muscles, it is often contaminated by ECG signal, hereby significantly increasing the power of EMG signal. This can hardly be avoided; therefore, to extract valid information it is necessary to process EMG signal to remove ECG signal. Here we model such that variations of the ECG in terms of amplitude and frequency time are evaluated by using the Heart rate and QRS complex; the respective variations are simultaneously captured by a set of third-order constant-coefficient polynomials modulating a stationary harmonic basis in the analysis window.

Keywords: LF, HRV, EMG, VLF, HF

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170 A warning and passenger safety system for railway compartment using WSN

Paper ID V7I2-1451 · Pages 924-926 · Embedded

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The railway industry plays a critical role in transportation and transit systems attributed to the ever-growing demand for catering to both freight and passenger. The present work is based on developing an automatic closing and opening of gates near the railway crossing. Generally, railway gates are manually handled by gatekeepers. The gatekeeper will get the information about whether the train is coming or not, from the nearer

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station. Once the train leaves the station, the station in charge will give the information about the arrival of the train to the nearest gatekeeper and alert him to get ready to close the gate. This human intervention can be avoided by using this system. If the arrival of the train is late due to some reason, this information will not send to the gatekeeper instantly. Hence the gate will remain closed until the train arrives this delay will cause the traffic problem near the gates and makes the people get into trouble. This will be prevented by using the system. In this system, we are using a relay driver to control the gate through WSN. The objective of this system is to create safety for women if they abused by someone, theft their things, and illness of passengers in the compartment by pressing the emergency request to send information through Zigbee to communicate in the nearer station. In this system, we are implementing the RFID reader to avoiding the fraud of passengers to travel without taking a ticket. This project helps us to avoid the hindrance happens from the passenger in the compartment and shows the information in the PC user of the railway station.

Keywords: PIC Microcontroller, RFID Reader, Emergency Request, Zigbee, Door Control, Relay Driver, and Railway Gate Control

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171 Safety defence device for the eternal feminine

Paper ID V7I2-1453 · Pages 927-929 · Embedded

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As we know the present era is with equal rights, where both men and women are taking equal responsibility in their respective works. Hence women are giving equal competition next to men in all fields. Every single day women and young girls from all walks of life are being assaulted, molested. Because of these reasons women can’t step out of their house. The only thought haunting in every women’s mind is when they will be able to move freely on the streets even on odd hours without worrying about their security. In critical situations, the women will not feel insecure or helpless if they have some kind of safety device with them. We propose to have a device, which is the integration of multiple devices. The implementation of the smart device is basically split into two sections the first part ensures to capture the image of the culprit. The captured image serves as valid proof against the one who has committed the crime. The second section deals with the defense application as we tend to concentrate more on providing self-defense for the women in danger. By making self-defense the first priority we make sure that occurrence of the critical situations is eliminated. The self-defense feature is capable of working in any of the circumstances. When the registered fingerprint is scanned, the GPS tracks the location and the GSM sends messages to the police and to the family. The buzzer in the device alerts the nearby people. These two factors form the combined self-defense application and help the victim to escape from the danger.

Keywords: Women Safety, Camera, Self-Defense, GPS, GSM, Fingerprint

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172 Designing of automatic hand sanitizer robot

Paper ID V7I2-1454 · Pages 930-932 · Embedded

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There is new broad health crisis bargaining the world with the ascent and flare-up of 2019 novel coronavirus (2019-nCoV) or the genuine extraordinary respiratory condition coronavirus 2 (SARS-CoV-2). It has spread to the world and tainted people with Covid- 19 infections. The transmission of the disease was viewed as spread through person-to-person which makes it easily diffuse. The infection spreading starts from the infected droplets during sneezing or coughing. These droplets can, in any case, live on inanimate surfaces even in the air, and transmitted the infection to humans. In order to reduce the spread of coronavirus, any contacts between people and potential carriers of the virus have to be limited. In current circumstances, social distancing and constant disinfection of public places become a necessity. The mask and the sanitizer are provided everywhere to protect the people from spreading the virus and to kill the virus from a human hand. The virus is spreading from the human hand and mouth saliva. The mouth spread is controlled with the mask cloth and the human hand is controlled by the hand wash sanitizer. The hand touch while pressing the dispenser usage also spreads from human to human. There should be an automatic hand wash sanitizer dispenser, to control and maintain the spread from human to human. Though, nowadays it is essential to sanitize hands, touching the same bottle surface already used by someone may increase the risk of contamination. The aim of this study is to design and develop a smart contactless hand sanitizer-dispensing system using IoT based robotics technology. The robot functionality has been examined, the present system has the ability to hand disinfect with less time consuming and minimal human interactions.

Keywords: Corona Virus, Covid-19, IoT Technology, Hand Disinfecting Robot, Hand Sanitizer

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173 Automatic Arboretum Monitoring System

Paper ID V7I2-1452 · Pages 933-936 · Embedded

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The greenhouse is climate-controlled structures specially designed for growing plants. Most greenhouse systems use manual systems for monitoring the temperature and humidity which can cause discomfort to the worker as they are bound to visit the greenhouse every day and manually control them. Also, a lot of problems can occur as it affects the production rate because the temperature and humidity must be constantly monitored to ensure the good yield of the plants. Internet of Things is one of the latest advances in information and communication technologies, providing global connectivity and management of sensors, devices, users

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with information. So the combination of IoT and embedded technology is used to monitor the fields. The thermo-Electric cooler is used to change the temperature regarding the surrounding. Usage of this cooler helps to grow the rare medicinal plants inside the greenhouse. Sensors like temperature, humidity, soil moisture, and Ph are the parameters used to check the healthy state of the soil.

Keywords: Internet of Things, Thermo Electric Cooler, Temperature Sensor, Humidity Sensor, Soil Moisture Sensor, NPK Sensor

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Volume 12, Issue 6 (November-December, 2026) is open for submissions. Last date: 31st December, 2026.

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