



JCEI's JAIHIND  
COLLEGE OF ENGINEERING, KURAN



# Conference Proceedings

NATIONAL e-CONFERENCE ON  
EMERGING TRENDS IN ENGINEERING  
& SCIENCES (NCETES)



## JCON-2021

Held on 09<sup>th</sup> & 10<sup>th</sup> March 2021

Sponsored by- Savitribai Phule Pune University, Pune



**PROCEEDING OF NATIONAL  
E-CONFERENCE ON EMERGING TRENDS IN  
ENGINEERING & SCIENCES (NCETES)  
JCON-2021.**

**09<sup>th</sup>-10<sup>th</sup> March 2021**

**Jaihind College of Engineering, Kuran**

**in association with Savitribai Phule Pune University, Pune.**



### **MESSAGE**

I'm happy that Jaihind College of Engineering, Kuran is contributing to the field of research by organizing this National e-Conference on Emerging Trends in Engineering and Sciences (NCETES) JCON-2021 in Jaihind College of Engineering. I hope this conference will bring together students, teachers, researchers, scientists and industrial, professionals to share their findings and discuss them in detail.

I congratulate all the delegates and participants and hope that this event nourishes and fosters the spirit of research, thereby catering to the wholesome development and enrichment of the society.

Wishing the event all success.

Hon. Shri. Jitendra M. Gunjal  
Chairman, JCEI, Narayangaon



### **MESSAGE**

It is noteworthy that JCEI's, Jaihind College of Engineering is progressing at a very fast pace. This year we are hosting the JCON-2021 National Conference in series in the Eleventh year of existence of the college. The response is very encouraging. The papers submitted by the students demonstrate the enthusiasm in their creations. Sponsorship of the Conference by the "Savitribai Phule Pune University" is a big blessing for all of us. Conference helps to reflect the work done by the students and the process of developing their minds to becoming an engineer. That is actually the aim and objective of education. The thought of our chairman that quality education to the poorest and needy children without being the burden on parents is being witnessed in the conference. Ultimate goal of the conference being to obtain views from others on the work projected by the students in their papers. These views will help students to improve upon and do a better job in future. Finally, this conference is a step towards setting up of a good professional, satisfying life by the students and alleviation of poverty for the nation. We would like to express our deepest appreciation to the authors whose technical contributions are presented in these proceedings. It is because of their excellent contributions and hard work that we have been able to prepare these proceedings. Wishing a grand success to the conference.

Prof. S. D. Gunjal  
Director  
JCEI, Narayangaon



## MESSAGE

Warm and Happy greeting to all.

I am immensely happy that our college is organizing an A National Conference on Emerging Trends in Engineering & Sciences (JCON 2021) on 09<sup>th</sup> and 10<sup>th</sup> March 2021 is going present a collection of various technical papers in the proceedings.

Under the guidance of our management JCOE continues to march on the way of success with confidence. The sharp, clear sighted vision and precise decision making powers of our management has benefited our college.

The dedicated HOD's and staff members and disciplined students of JCOE are the added features of our college. The role students in building nation cannot be overlooked and students at JCOE are trained in all aspects to become a successful engineers and good citizens. On this occasion I would like to wish all very best to all delegates.

I also congratulate to Convener, Organizing Committee and all Coordinators and students for their contribution and efforts for the success of the conference.

I wish the conference all the success.

Dr. D. J. Garkal,  
Principal  
Jaihind College of Engineering, Kuran



## FOREWORD

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It is my great pleasure to present the proceedings of the A National Conference on “Emerging Trends in Engineering and Sciences”, NCETES (JCON 2021).

I welcome the participants of JCON 2021. The main goal of organizing this conference is to share and enhance the knowledge of every individual of this world. We have given a good opportunity for those who have a desire in knowing the present technological developments and also share their ideas. Furthermore, this conference will also facilitate the participants to expose and share various novel ideas. The conference aims to bridge the researchers working in academia and other professionals through research presentations and keynote addresses in current technological trends. It reflects the growing importance of intelligent systems as a field of research and practice. You will get ample opportunities to expand your knowledge and network. Outside of the conference, I hope that you would enjoy some of the many attractions found in and around our beautiful campus of Jaihind College of Engineering. I wish that NCETES will keep on growing in coming years with more impact on the International research community. I thank the conference committee for extending their valuable time in organizing the program and all the authors, reviewers, other contributors for their bright efforts and their belief in the excellence of JCON 2021 and Jaihind faculty for Making a conference success.

Dr. V. M. Dhede  
Convenor NCETES-2021



# FOREWORD

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Welcome to the 2021 A National Conference on Emerging Trends in Engineering & Sciences (NCETES-2021) organized by Jaihind College of Engineering, Kuran (Pune), Maharashtra. This conference is scheduled to be held on 09 th and 10 th March 2021. The main aim of the conference is to provide a high level international forum to bring together industry professionals, academics, and individuals from institutions, industrial and government agencies to exchange information, share achievements, and discuss the advancement in the fields of Computing, Communication, and Information Security etc. This is one of the most prestigious conferences conceptualized in the fields of engineering and sciences. The conference features a rich collection of original research embodied through oral presentation, invited talk and interactive demos.

We received submissions from across the world for all track such as civil engineering, computer engineering, E&Tc engineering, Mechanical engineering, general science fields. Each submission was initially screened for conference scope, technical relevance and possible plagiarism by technical program committee. The papers successfully passed the screening stage were assigned to reviewers based on their area of expertise, Outcome of the reviewer were then examined by technical program committee for their recommendation on the paper to the organizing chair. The organizing chair communicated to corresponding author about status of the paper and changes in manuscript if any required. The conference received manuscripts from different states. The conference would not have been possible without vision and dedicated efforts of a number of people. I am indebted to the management of JCEI, Principal, Program committee members for their exceptional work.

I would like to thanks to all 288 authors who have submitted their research review articles for considering JCON 2021 as a platform to present and publish their work. I also would like to deploy acknowledge all the presenters. Session chairs and attendee who bring JCON 2021 a valid meaningful and potential encouragement.

Dr. R. M. Mulajkar  
Convenor NCETES-2021

## MESSAGE

JCON 2021 e-Conference has established as reference for the high-quality research in all expects for interaction and exchange of ideas. JCON 2021 fortunate to attract high interest among the community. The conference received papers from different fields the members of technical review committee work efficiently. We are grateful to thanks all authors and all committee members for their hard work and dedication.

### **JCON-2021 Co-ordinator**

Prof. S. B. Andre  
Prof. G. R. Nangare  
Prof. C. S. Arya  
Prof. S. R. Kokate



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Prof.G.R.Nangare  
Prof. C. S. Arya  
Prof. S. R. Kokate

**Proceeding**  
**of**  
**National e-Conference**  
**on**  
**Emerging Trends in Engineering and Sciences**  
**(NCETES)**

**Organized by**  
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**SPPU, Pune**

## INDEX

Paper ID	Title
<b>MECHANICAL ENGINEERING</b>	
<b>Page no. 1</b>	
JCON21_MECH_101	Solar Air Purifier
JCON21_MECH_102	Advanced Portable Solar Cleaning Wireless Robot
JCON21_MECH_103	Electromagnetic Clutch
JCON21_MECH_104	Design And Development of Poultry Plower Machine
JCON21_MECH_105	Improve Machining Process And Cost Of Job Tooth Wheel
JCON21_MECH_106	Design Of Footstep Power Generation System Using Rack And Pinion Gears Mechanism
JCON21_MECH_107	Solar Panel Tracking and Cleaning System
JCON21_MECH_108	Contact Less Power Transmission Using Magnetic Gear
JCON21_MECH_109	Design & Analysis Of Mechanical Scissor Lift
JCON21_MECH_110	Fall Protection Equipment- Roof Clamp/hook
JCON21_MECH_111	Review Paper on CAD Customization
JCON21_MECH_112	Automatic Power transmission of Automobile
JCON21_MECH_113	Self Power Generated E-Bike
JCON21_MECH_115	Smart Power Generation From Waste Heat By Thermoelectric Generator
JCON21_MECH_117	Pneumatic Injection molding machine
JCON21_MECH_120	Design & Development of Duel Fuel (Hybrid) Scooter
JCON21_MECH_122	Design & Analysis of Fully Automatic Single Plate Clutch for Automatic Autonomous Vehicle
JCON21_MECH_123	Hydraulic sheet metal bending by using Finite Element Method
JCON21_MECH_125	Power Generating by using Fan
JCON21_MECH_132	Magnetic Power Transmission
JCON21_MECH_133	Recycling Approach for Waste by Shredder Machine
<b>CIVIL ENGINEERING</b>	
<b>Page no. 13</b>	
JCON21_CIVIL_201	Review Paper on Design of Low Cost Roofing Tiles Using Agricultural Waste
JCON21_CIVIL_202	Review paper on Improvement of Shear Strength Of Soil By Using Bitumen Emulsion
JCON21_CIVIL_203	Review paper on Comparitive Study Between Peca formwork and Conventional Formwork
JCON21_CIVIL_204	Improving Bearing Capacity of Sandy soil by using Tyre Crumb
JCON21_CIVIL_205	Displacement based seismic design of steel MRF in hilly region

JCON21_CIVIL_206	Phytoremediation in Sewage Treatment Plant
JCON21_CIVIL_207	Risk Management Framework For Governance Issues In PPP Infrastructure Projects In India
JCON21_CIVIL_208	Generation of Electricity by Using Solid Waste
JCON21_CIVIL_209	Studies The CCS and Problem On CCS
JCON21_CIVIL_210	Safety of Suspension Bridge by Using Water Level Sensors
JCON21_CIVIL_211	Reuse of Plastic Water bottle in wall construction and aesthetic purposes.
JCON21_CIVIL_212	GIS Application in Ground Water Depth Analysis
JCON21_CIVIL_213	The Structural Audit of RCC Structure by using Non Destructive Test methods
JCON21_CIVIL_214	Effect of Mix Ratio and Curing Water on the Compressive Strength of Oil Palm Shell (OPS) Aggregate Concrete
JCON21_CIVIL_215	Effect of Elevated Temperature on Mechanical Properties of Early Age Concrete
JCON21_CIVIL_216	Light Weight Foam Concrete Material
JCON21_CIVIL_217	Eutrofication Studies of Bhima River
JCON21_CIVIL_219	Integration of Soil Moisture Sensor Based Automated Drip Irrigation System for Sugarcane Crop
JCON21_CIVIL_220	Impact of Corona Pandemic on Construction industry

**ELECTRONICS AND TELECOMMUNICATION ENGG.**

**Page no.24**

JCON21_ETC_301	Android Based C19 Warrior Robot
JCON21_ETC_302	Increasing Road Safety Using Internet of Things and Machine Learning
JCON21_ETC_303	FPGA Implementation of Advanced Encryption Standard
JCON21_ETC_304	Vending Machine For Masks And Sanitizer
JCON21_ETC_305	Smart Garbage Monitoring System
JCON21_ETC_306	Automated Soil less Farming Method for Root-Type Crops
JCON21_ETC_307	UV chamber- Covid-19 Fighter
JCON21_ETC_308	E-Rakshak the Border Surveillance Robots

JCON21_ETC_309	Image processing based fire detection using raspberry pi
<b>COMPUTER ENGINEERING</b>	
<b>Page no. 30</b>	
JCON2021_COMP_401	Anti Corona System Using Machine Learning
JCON2021_COMP_402	Faulty PCB Detection System
JCON2021_COMP_403	Enhanced Security for ATM Machine with Facial Recognition and OTP with Shuffle Keypad Features
JCON2021_COMP_404	Influential Node Tracking on Social Media Using Greedy
JCON2021_COMP_405	Woman Safety Using Arduino
JCON2021_COMP_406	Soil Classification and Suggestion of Suitable Crop Using Machine Learning
JCON2021_COMP_407	Identification of Mishandling of Data Using- Data Mining
JCON2021_COMP_408	Hybrid Approach Recommendation
JCON2021_COMP_409	Security and Evidence based Ranking System For Mobile App
JCON 2021_COMP_410	Moisture Detection Using IOT
JCON2021_COMP_411	Agro Expert Using Google API
JCON2021_COMP_412	Group data sharing Using Cloud Computing
JCON2021_COMP_413	Self-Learning IQ Test Game
JCON2021_COMP_414	An IOT Based Bank Locker High Security System
JCON2021_COMP_415	E-Healthcare using QR Code
JCON2021_COMP_416	Demand Forecast using Machine Learning
JCON2021_COMP_417	COVID-19 Epidemic Analysis using deep learning
JCON2021_COMP_418	E-Ration Distribution System by QR-Code
JCON2021_COMP_419	Depression Detection by Analyzing
JCON2021_COMP_420	Identification Novel Approach For Sql Injection Attacks
JCON2021_COMP_421	Privacy Preserving in Online Social Network for Control of Photo-Sharing
JCON2021_COMP_422	Smart Video Surveillance System Based On Machine Learning
JCON2021_COMP_423	Parkinson's Disease Prediction Using Machine Learning
JCON2021_COMP_424	Performance Evaluation OfEvacuated Solar Tube Collector Using Non-Edible OilAs Working Fluid
JCON2021_COMP_425	Moisture Detection Using IotTechnique
JCON2021_COMP_426	Android Based C19warrior Robot

JCON2021_COMP_427	Faulty Pcb Detection System
JCON2021_COMP_428	Parkinsons Disease PredictionUsing Machine Learning
JCON2021_COMP_429	Depression Detection By Analyzing Posts Of Users OnWetalk

# **MECHANICAL ENGINEERING**

### **JCON2021\_MECH\_101**

#### **Solar Air Purifier**

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**Abstract** - This research paper is about designing along with fabricating the air purifier system which is powered by solar energy and testing the effectiveness of the system to curb the air pollution. The focus is on extracting the suspended particulate matter from the air which are the major contributors in the pollution of air in many metropolitan cities. It works on a non-conventional method and intends to achieve best possible air purification results using eco-friendly and economical method. It basically works on the basic principle of adhesion of the suspended particles in the air with the liquid and settles down due to being heavier than air and gets separated from the air helping us to achieve better air quality index. The fans and the pump in system are operated by solar energy, produced by solar panels, which converts the solar radiations into electricity.

**Index Terms** - Air Quality index, particulate matter, Atomization, precipitation, moisture content.

### **JCON2021\_MECH\_102**

#### **Advanced Portable Solar Cleaning Wireless Robot**

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**Abstract** - This paper proposes a conceptual framework to design and develop robots for addressing the soiling or the dust cleaning issue on the building integrated photovoltaics (BIPV) and building applied photovoltaics (BAPV). BIPV and BAPV turn the present and future buildings (high rise or low rise) into power stations with the introduction of photovoltaics either in the façade (90° wall) or roof (flat or pitched) configuration. But one of the significant challenges that influence the energy performance is the dust accumulation. This is a serious issue in the places where air pollution is very high. Addressing this would be very difficult for the human workforce, and the complexity and tediousness would increase depending on the size of the BIPV and BAPV array or the height of the building. Currently, there are few dust cleaning robots which could offer services in addressing the soiling issues in conventional photovoltaic installations. The existing dust cleaning robots (DCR) could not offer a better feasible solution in BIPV and BAPV as they offered in traditional PV systems that were installed in an open area. Hence for addressing dust cleaning issue, some novel conceptual schemas related to robot developments were proposed in this paper considering the installation configuration of PV systems for building applications. Here, DCR's for three configuration of PV installation with building applications namely BIPV/BAPV façade, BIPV/BAPV horizontal roof, and BIPV/BAPV pitched roof are dealt. The proposed conceptual robots were briefly described with the schematic views highlighting operation, energy consumptions, and slipping issue etc. Scope for the development and various research challenges that are to be considered during the design stage are highlighted along with the discussion.



### **JCON2021\_MECH\_103**

#### **Electromagnetic Clutch**

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Abstract-This project is titled “ELECTROMAGNETIC CLUTCH” has been conceived having studied the automatic clutch mechanism in vehicles. Now the project has mainly concentrated on a suitable control unit has been designed for these clutch. The fabrication part of it has been considered with almost ease for its simplicity and economy, such that this can be accommodated as one of the essential tools on automobile garages.

Key Words - Electromagnetic clutch, magnetic field, rotor, idling.

### **JCON2021\_MECH\_104**

#### **Design And Development of Poultry Plower Machine**

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Abstract—Poultry technology is the process of applying the technology daily life and applying that to poultry sector, which improves the output of poultry industries and also develop mechanical machine to help the poultry field which reduces the amount and time of work spent on the folk. Hence in this work paper we decided to design a better mechanical machine which is available at poultry farmers at a cheaper rate and which can stir the litter and remove the trap gases from litter at same time. To design rotavator simulation process are carried out by using finite element analysis software. Various stresses are developed on rotavator are found by using Ansys software. This paper consists of a better design of the machine which is used specially for to stir litter layers. For various poultry implements and non-availability of sufficient farm labour, various automation are done in poultries. The success of poultry farms indirectly depends on timely stirring of litter with minimizing the requirement of labor. The success of poultry farms indirectly depends on timely stirring of litter with minimizing the requirement of labor. Our machine deals with stirring of litter with the help of rotary rotavator, driving mechanism provided with electric motor having less noise which is prime consideration while designing of mechanism.

Keywords—Poultry Plower, Rotavator, Poultry farm

### **JCON2021\_MECH\_105**

#### **Improve Machining Process And Cost Of Job Tooth Wheel**

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Abstract - Tooth wheel is the job of Siddhanath Engineering Pvt Ltd Company, which is used in the train assembly in the mosco train. In this job I have tried to reduce the set up because the more setup are released the stress from the job and the job life was decrease. Due to more setup the job is not dispatch on the date so customer complaints are occurs. First in our industry the plate material was used so the material taking more time to come in company for machining. Also the plate material is not hard material so chips are not form and this material is not machining so fast as compare to forging material. In forging material the chips are formed and due to the hardening the material this material is easy to machining.

Index Terms – Manufacturing Processes , Design , Tooth Wheel

### **JCON2021\_MECH\_106**

#### **Design of Footstep Power Generation System Using Rack And Pinion Gears Mechanism**

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Abstract :Energy is the main concern of present day. The production of electric current in a huge amount is the need of today world. There are different methods used for the production of energy like conventional and non-conventional methods. Here I will represent the non- conventional method for the production of electric current. This non- conventional method is “Footstep power generation Mechanism” here the energy will be produce by moving the human on a moving plates in which rack and pinion gear are used to convert the physical energy into mechanical energy and further they will have converted into electric energy by using the dynamo. By using this method, we will have produced the energy to light up the bulb. I will also represent the simulation of the footstep power generator using the ansys15.0 software. By the results its seen we will produce the power in one hour. This project will be cost effective and easy to installed in a populated area like railway station, bus stands and in shopping malls. Our project is cost effective and easy to implement.

**JCON2021\_MECH\_107**

**Report on Solar Panel Tracking and Cleaning System**

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**Abstract**— The increasing demand for energy, the continuous reduction in existing sources of fossil fuels and the growing concern regarding environment pollution, have pushed mankind to explore new technologies for the production of electrical energy using clean, renewable sources, such as solar energy, wind energy, etc. Among the non-conventional, renewable energy sources, solar energy affords great potential for conversion into electric power, able to ensure an important part of the electrical energy needs of the planet. This paper deals with the design and execution of a solar tracker system dedicated to the PV conversion panels. The proposed single axis solar tracker device ensures the optimization of the conversion of solar energy into electricity by properly orienting the PV panel in accordance with the real position of the sun. The solar PV modules are generally employed in dusty environments which is the case in tropical countries like India. The dust gets accumulated on the front surface of the module and blocks the incident light from the sun. It reduces the power generation capacity of the module. The power output reduces as much as by 50% if the module is not cleaned for a month. In order to regularly clean the dust, an automatic cleaning system has been designed, which senses the dust on the solar panel and also cleans the module automatically. In terms of daily energy generation, the presented automatic-cleaning scheme provides about 30% more energy output when compared to the dust accumulated PV module.

**Key Words**:- Solar Energy, Cleaning System, Semi- automatic tracking mechanism.

**JCON2021\_MECH\_108**

**Contact Less Power Transmission Using Magnatic Gear**

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**Abstract**— This paper reviews the historic and current development of magnetic gear technologies. There has been considerable amount of research and development activities on magnetic gear technologies in recent years. However, it is still not clear if this technology is ready for potential industry applications. The purpose of this paper is to summarize the historic and current development work of magnetic gear technologies in an attempt to give readers some insight into the advantages and disadvantages, challenges, opportunities and technology readiness.

**Keywords**—Gear Drive, Magnetism material, magnetic flux modulation, permanent magnet, special electrical machine, etc.

### **JCON2021\_MECH\_109**

#### **Design & Analysis Of Mechanical Scissor Lift**

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**Abstract**—The project relates to the lifting equipment or more particularly to a scissor jack for lifting a body to appreciable height that can be used for a various purpose like maintenance and many material handling operations. The mode of operation can be a mechanical, pneumatic or hydraulic. Mechanical mode of operation is suitable for the medium scale work, and precise range of application, where elevation for extended period of time is required, precisely without drifting. So the project is aimed with an objective to design the Screw Operated Lifting Equipment, for the maintenance purpose of the building with ceiling height of 1.625 m along with four workmen each weighting 80 kg along with their equipment's. So this lifting equipment is designed for load carrying capacity of 500 kg keeping F.O.S – 1.4(with the reference of research paper), which overcomes the limitations of the hydraulic scissor lift in Repeatable positioning in the millimeter range even at high speed, maintaining the position with no drift at specified elevation for extended period of time, completely smooth motion and uniform speed, constant force and lifting speed, low vibration and noise, etc.

**Keywords**—Scissor Lift, Screw Operated Lifting Equipment

### **JCON2021\_MECH\_110**

#### **Fall Protection Equipment- Roof Clamp/hook**

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**Abstract** - This research paper is about designing along with fall protection equipment which is powered by to protect workers on roofing jobs, employers must identify the hazards present and take steps to address them. This guide covers safe practices to prevent falls, other physical injuries, hazardous substance exposures, and injuries and illnesses related to environmental conditions method. It basically works on the basic principle of adhesion of the suspended particles in the air with the liquid and settles down due to being heavier than air and gets separated from the air helping us to achieve better air quality index. The fans and the pump in system are operated by solar energy, produced by solar panels, which converts the solar radiations into electricity. An anchor for securing a safety line to a roof having a pair of sloping portions defining an angle there between. The anchor is in the form of a two person permanent roof anchor for use by the residential construction industry as an anchor point from which construction or contractor personnel may attach an approved life line to which an approved personal fall arrest safety device may be attached.

### **JCON2021\_MECH\_111**

#### **Review Paper on CAD Customization**

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**Abstract**— One of the most powerful features of CAD systems is customization. By using this customization tool, it is possible to create new commands and ways of human- machine interaction that ease repetitive or complex tasks. In this paper we have discussed the different research work done by researchers and some case studies on CAD system customization. The paper also contains the review on different work done in each research work.

**Keywords**-Customization,CAD.

### **JCON2021\_MECH\_112**

#### **Automatic Power transmission of Automobile**

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**Abstract** –Bevel gears are generally used for transmission through non parallel shafts and worm and worm wheel and cross helical gears are used for transmission through non parallel non intersecting shafts. This gears are costly to manufacture and come in standardized specifications thus limiting the flexibility of its application. So here we introduce gearless transmission mechanism which can transmit at any angle from 0 to 180. The mechanism of made of input and output hubs with axial holes drilled along a circular path and links bent at the angle between two shafts. So for a non-standard angle between shafts; only the angle of the links needs to be changed whereas the whole gear is needed to be redesigned in case of bevel gears. This reduces the cost of this mechanism drastically and also increases its flexibility. Gearless transmission mechanism transmits power from input to output shafts by means of sliding links that form revolute pair with the hub. Links bent at required angle slide inside the holes in the hub. Thus, as the holes in input hub rotate; it pushes the links and in turn output hub is rotated. This mechanism can be used as a replacement for bevel gears in low cost, low torque applications. It can transmit at any angle 0 to 180. In this paper the mechanism is studied and a possible power transmission.

### **JCON2021\_MECH\_113**

#### **Self Power Generated E-Bike**

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Abstract - Now day's bike or vehicle is very important our fast life for travelling and this is also play very important role in growth ofeconomy but main drawback of this bike and vehicle is produce pollution in environment because of burning fuel. For this reason, increases global warming and also storage offuel is limited. Due to that now day's need of eco-friendly technology for travelling. E-bike this is nothing but one example of eco-friendly technology but this technology having some drawback to overcome the drawback of e-bike we have been design self- power generating electricalbike. This design overcomes all the drawback of e bike. Self- power generating electrical bike is nothing but e-bike that generate its own power supply by using some arrangement.

Keywords - Alternator, Battery, Motor, DC Booster

### **JCON2021\_MECH\_115**

#### **Smart Power Generation from Waste Heat by Thermoelectric Generator**

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Abstract- Generating electricity in present there is a shortage of fossil fuel, oil, gas, etc. burning of these fuels causes environmental problem like radio activity pollution, global warming etc. So that these (coal, oil, gas) are the limiting resources hence resulting new technology is needed for electricity generation, by using thermoelectric generators to generate power as a most promising technology and environmental free and several advantages in production. Thermoelectric generator can convert directly thermal (heat) energy into electrical energy. In this TEG there are no moving parts and it can not be produce any waste during power production hence it is consider as a green technology. Thermoelectric power generator convert direct waste heat in to generate electricity By this it eliminated emission so we can believe this green technology. Thermoelectric power generation offer a potential application in the direct exchange of waste-heat energy into electrical power where it is unnecessary to believe the cost of the thermal energy input .This method will have an maximum outcome. The application of this option green technology in converting waste-heat energy directly into electrical power can too improve the overall efficiencies of energy conversion systems. Heat source which is need for this conversion is less when contrast to conventional methods. By using this energy is used to charge the mobile electronics.

Keywords-Thermoelectric generator, seebeck effect, waste-heat recovery, alternative green technology, direct energy conversion, thermocouple , thermal shield, thermoelectric materials, thermo electric module, thermal fin.

**JCON2021\_MECH\_117**

**Pneumatic Injection Molding Machine**

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Abstract— - This paper deals with the development of pneumatically operated compression molding machine for polymer composites. The main aim of fabricating this machine is to prepare the fiber reinforced polymer composite samples for testing purpose. Researchers working on composites for research work they require the samples of composites with different composition for the purpose of testing. For that this machine is useful for the researchers and also for the manufacturer to produce small sized less complicated plastic components. In this machine temperature of specimen dies can be controlled automatically by using sensors and by using FRL (filter, regulator and lubricator) unit, the pressure can be controlled. The low density, high strength and high stiffness to weight ratio, fiber reinforced composite materials are manufactured by this machine are low cost. In this research work, the tensile strength of test specimen of Epoxy without Fiber, Epoxy with carbon fiber, and Epoxy with coconut fiber are tested and compared.

Key Words: Carbon fiber, Epoxy Resin, Fiber reinforced Composite, Compression Moulding, and Test Specimen.

**JCON2021\_MECH\_120**

**Design & Development of Dual Fuel (Hybrid) Scooter**

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Abstract— This project is aimed at designing and developing of A Dual Fuel electric scooter using hub motor. The proposed vehicle is capable to work with both fuel like petrol & electricity And also can be used for short distance transportation purpose with minimum fuel cost.

Keywords— Hub motor, electric scooter



**JCON2021\_MECH\_122**

**Design & Analysis of Fully Automatic Single Plate Clutch for Automatic Autonomous Vehicle**

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Abstract- Agriculture vehicles and farming equipment like tractors and Tillers, Sprayers etc., also use a similar automobile transmission. With the shortage in labor and also increase in labor expenses there is a trend to automate the farming equipment to save time and labor cost. The major challenges in automation is the clutch control which is presently manual, and the automatic clutch control in the high end vehicles cannot be used due to the high cost, complexity of design. Hence in order to carry out the automatic clutch control a special electro mechanical clutch is needed. The fully- automatic electromechanical Single plate clutch for autonomous agriculture spray vehicle is our attempt to design develop and apply the clutch to agriculture automation. The Clutch development includes the theoretical design as to the Power and torque transmission of the engine power and also design of an innovation clutch engagement-disengagement arrangement with quick-response, low cost, easy serviceability and compact space. The paper presents a brief overview of the clutch, design and analysis of the critical components like the flywheel, clutch plate and pressure plate, The components have been developed using Unigraphic Nx8 and the structural analysis has been done using Ansys Workbench 16.0 . The testing was carried out on the clutch using a test rig to determine the performance characteristic of the clutch.

Key Words -Single Plate Clutch, Electromechanical, Autonomous Agriculture Vehicle.

**JCON2021\_MECH\_123**

**Hydraulic sheet metal bending by using Finite Element Method**

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Abstract— Out of all the traditional manufacturing processes like casting, forming, cutting, joining, sheet metal forming, deep drawing etc., sheet metal forming is a special case of deformation process in which sheet metals of less than 6 mm are formed. It is the process of converting a flat sheet of metal into a part of desired shape without fracture or excessive localized thinning. Hence the formability assessment of the different metals

Keywords—Sheet metal, finite element analysis, deformation, formability.



### **JCON2021\_MECH\_125**

#### **Power Generating by using Fan**

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**Abstract**— Fans are the most used items in India despite the widespread availability of Cooler's and air conditioners. Since the initial capital cost of solar systems is still quite high , when it comes to generate power for a domestic use and energy saving and energy generating is a major issue for mankind .This paper presents method of generating power by a ceiling fan . The generated power can be either used or can be stored in a battery for powering some other devices.

**Keywords**— Battery,Transformer,Generator,etc

### **JCON2021\_MECH\_132**

#### **Magnetic Power Transmission**

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**Abstract**-A gear is a power-transmitting element that transmits rotary motion from one shaft to another by means of successively engaging teeth. A gear mechanism or a gear train is any collection of two or more meshing gears, which is widely used in mechanical devices and machines nowadays. However, there are inherent problems such as vibration, noise, abrasion and the necessity of lubrication due to contact force and friction. Recently, a noncontact magnetic gear that utilizes permanent magnets in order to solve these problems has been developed. It transmits torque by noncontact magnetic coupling rather than meshed mechanical gear teeth. Compared with conventional mechanical gear mechanisms, noncontact magnetic gear mechanisms possess unique attributes, including: no need for lubricants, low mechanical energy losses, overload protection, and tolerance of misalignment between the input and output shafts. Beginning in 1941, Faus presented a magnetic gear, with a geometric configuration analogous to ancient mechanical pin gears, with magnetic pins inserted in the base of the magnetic gear. A magnetic worm and worm gear set was presented in the same U. S. patent. The aim of this study is to analyze the transmitted torque of an external-type magnetic gear mechanism with rectangular magnet blocks. A two-dimensional (2-D) analytical approach employing the current sheet model is applied to evaluate the magnetic flux densities within the air gap, and then, to calculate the transmitted torque of the proposed magnetic gear mechanism. These two significant items can be derived in terms of the magnet's material properties and the geometric parameters of the magnetic gear mechanism. The analytical results are also compared to those of a 2-D finite-element analysis (FEA) by employing a commercial package, ANSOFT/ Maxwell.

**JCON2021\_MECH\_133**

**Recycling Approach for Waste by Shredder Machine**

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**Abstract**— the fabrication and working details of a machine capable of washing and shredding Commingled waste plastics is presented in this paper. The developed machine performs along with shredding of waste plastics using an arrangement of rotary and fixed blades to provide fine shredded form of waste plastics as output. This work was carried out with the objective of designing and developing a washing and shredding machine for the conversion of waste plastics into granulated chips which is to serve as input to an extruder-injection moulding machine to manufacture plastic lumber. The focus in developing the washing and shredding machine was to create a machine with minimal parts, possess durability, affordability, easy to operate, and safe operating conditions. The process begins with the loading of plastic waste like LDPE, LLDPE, PP, PS, multilayered plastics, and laminates into the drum. The plastic waste is loaded in terms of batches. The batch sizes entering the drum will be approximately between 30-45 kg in weight and it is loaded manually. The loaded plastic will then be subjected to wet shredding in presence of pressurized cleaning water sprayed from the top of the drum using the water pump. The shearing effect or cutting action takes place due to the interaction of the moving blades with the fixed blades. Thus, the soft plastic breaks away into small chips or flakes and is pushed to the sides of the drum wall due to centrifugal force. The blade rotate at a speed of about 900 RPM and as a result causes the shredded plastics to keep rotating in a vortex within the drum causing further reduction in size. Also, during the process of shredding, water is sprayed at high pressure from the top of the drum which cleans the waste plastics while wet shredding takes place. Water also increases the blade life as it cools the blades. during the cutting action of the waste plastics. **Keywords**— Mechanical recycling, Resource Modeling, Energy Demand, Granulator Mechanical Recycling

# **CIVIL ENGINEERING**

### **JCON2021\_CIVIL\_201**

#### **Review Paper on Design of Low Cost Roofing Tiles Using Agricultural Waste**

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**Abstract**—The condition of living in shack in remote areas is becoming not easy day by day due to changes in atmosphere. The requirement of good and durable alternative roof cover replacing with ordinary and poor class roof is necessary. Also the proper disposal of agricultural waste is important. In this project To face both problems we have prepared and evaluated low cost roofing tiles by using raw material as agricultural waste to utilize solid waste in remote areas. As per results, in making roofing tiles we can comfortably replace the considerable quantity of river sand with the powder of corn cob in proper ratio which can give similar compressive strength as standard tiles gives. We can also reduce the cost of roofing tiles by replacing the river sand with powder of corn cob while making the tile. By this manufacturing cost and selling price of tiles can be reduce and it will became affordable. And thus preparation of such tiles will gives considerable healthy environment and economic benefits

**Keywords**— Roofing tiles, corn cob, compressive strength,

### **JCON2021\_CIVIL\_202**

#### **Review paper on Improvement of Shear Strength Of Soil By Using Bitumen Emulsion**

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**Abstract**— The main objective of this study is to improve the properties of the Alluvial soil by adding bitumen emulsion. An attempt has been to use emulsion for improving the strength of Alluvial soil expressed in terms of CBR values which may prove to be economical made. Soil is one of the nature's most abundant construction materials. Almost all type of construction is built with or upon the soil. If the sub grade is not enough good the whole structure will face failure such as cracks. Soil is used sub base and base material, If strength of soil is poor, then stabilization is normally needed. Subgrade is sometimes stabilized or replaced with stronger soil. The process of soil stabilization helps to achieve the required properties in a soil needed for the type of construction work. Pavements are a conglomeration of materials.

### **JCON2021\_CIVIL\_203**

#### **Review paper on Comparative Study Between Peca formwork and Conventional Formwork**

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**Abstract:-** Formwork, which holds and supports wet concrete till such time it cures, is a very vital element in concrete construction. With the globalization of Indian economy and introduction of multinationals in India for the construction and nations pride program of golden quadrilateral, it has become foremost to have speedy construction and timely completion of projects. Now days, low waste modern formwork systems for superstructure construction are commonly adopted. Formwork system affects on the cost, time, and quality of project delivery. This paper aims to compare merits and demerits by using a conventional timber formwork and pecaformwork system . The comparisons include costs, time and quality of these systems. for better understanding of this topic, different construction sites are studied where most advance technique In formwork are used and the collected from these sites is presented in order to give comparison between conventional formwork and peca formwork.

**Keywords:** formwork; Conventional Timber Formwork; modern formwork systems.

### **JCON2021\_CIVIL\_204**

#### **Improving Bearing Capacity of Sandy soil by using Tyre Crumb**

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**Abstract-**Soil properties play very important role in construction. sometime the properties of soil are not favorable for construction and we used some method to improve properties of soil called soil stabilization. Waste or scrap materials cause a lot of environmental problems and lead to economic problems. To minimize these problems, it is necessary to find safe ways to reduce the harms on environmental issues and on the economy accompanying with accumulated large wastes. This study introduces an attempt to improve bearing capacity of sandy soil using a new additive in form of waste tyre crumb instead of conventional kinds used in the soil stabilization. Different percentages of waste tyre crumb are hand mixed with dry sand as a trial to stabilize the sand with local cheap materials. Some geotechnical properties of composite specimens of (soil + tyre crumb) were studied and the main findings of testing approved the ability to stabilize sand effectively using scrap tyre chips. Shear strength of sand was increased as a result to increase both friction angle and cohesion after adding tire chips to sand. A significant reduction in specific gravity and maximum dry density with a little reduction in optimum moisture content was marked with increase tire crumb content in sand due to the low unit weight of tire crumb.

**Keywords:** Shear Strength, Waste Materials, Tyre crumb, Sand Improvement, Bearing Capacity , Direct Shear Test.

### **JCON2021\_CIVIL\_205**

#### **Displacement based seismic design of steel MRF in hilly region**

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**Abstract :** Designing a structure in such a way that reducing damage during an earthquake makes the structure quite uneconomical, as the earthquake might or might not occur in its life time and is a rare phenomenon. In this paper a G+6 existing STEEL framed structure has been analyzed and designed using STAAD.Pro V8i. The building is designed as per IS 1893(Part 1):2002 for earthquake forces in different seismic zones. The main objectives of the paper are to compare the variation of steel percentage, maximum shear force, maximum bending moment, and maximum deflection in different seismic zone. Variations are drastically higher from zone II to zone V. The steel percentage, maximum shear force, maximum bending moment, maximum deflection is increases from zone II to zone V, and also to study using Equivalent static method buildings on slope grounds with different number of storeys.

**Keywords -** STAAD-Pro, steel percentage, Maximum Shear force, Maximum Bending Moment, Maximum Deflection, Seismic zones.

### **JCON2021\_CIVIL\_206**

#### **Phytoremediation in Sewage Treatment Plant**

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**Abstract-** Nowadays many technologies are using for treatment of environmental pollutions and phytoremediation as a green technology is going on to convert to one of the main ecofriendly technologies which scientist using in their researches. Aquatic media as a fundamental and critical part of human environment have main role in water resources and food chain. In this chapter we present different aspect and types of phytoremediation in aquatic media purification from metallic elements.

**Keywords:** Phytoremediation; hexavalent chromium; water hyacinth

**JCON2021\_CIVIL\_207**

**Risk Management Framework For Governance Issues In PPP Infrastructure Projects In India**

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Abstract—Infrastructure project are going through a lot of difficulties mostly connected with non standard established financing in country.during and after the transition period undeveloped, insufficient but before all obsolete infrastructure in India become an essential problem for further development of main economic resources.(transportation agricultural mining tourism etc.) Infrastructure network is necessity for the development of different sectors( energetic agricultural industry commerce etc.) The analysis of potential risks elements throughout the processes from binding to operational infrastructure project is one of the most important element to maximizing profit and functionality and properly develop country infrastructure while mineralizing potential difficulties that may arise much of the risk of a PPP project comes from the complexity of financing, taxation law regularity acquire technical documentation and construction process involved in a major infrastructure venture and their solution and management on infrastructure projects are explain in this paper. After prblem are analyse and risk management framework are presented for managing risks on PPP project in India. main purpose of this paper is to investigate critical issues associate with build operate transfer project in India.

Keywords: Public private partnership (PPP) projects, governance issues and risk management, solution of risk management framework.

**JCON2021\_CIVIL\_208**

**Generation od Electricity by Using Solid Waste**

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Abstract—The growing population all around the world has increase the quantity of solid waste the disposal of which has become a difficult task to municipal authority. Utilization of municipal solid waste as fuel in power plant in India has gained the attention of the government and investors. Energy demand and security issues are severd by environmental concerns due increasing carbon emission led by burning of fossil fuels . solid waste generation in country is increasing over the year due to the change in life style and increasing consumers resulting from rapid urbanization and economic growth posing environmental threat ,impacting human health and ecosystem That is why we need to converting municipal solid waste into energy.

Keywords—waste to energy, municipal solid waste, energy policies, power plant layout.

### **JCON2021\_CIVIL\_209**

#### **Studies The CCS and Problem On CCS**

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**Abstract-** The various aspects of the 3D cellular confinement systems (geocells) subjected to static loading are comprehensively studied with the help of experimental and numerical studies. The performances of the geocells were separately studied in both sand and clay beds. Laboratory tests were performed on single as well as multiple cells. The behavior of 3D-cells made of different materials such as Novel polymeric alloy, geogrids and bamboo were compared. Moreover, the performances of the geocells were compared with other forms of geosynthetic reinforcements namely, geogrids and the combination of geocells and geogrids. A Realistic approach of modelling the geocells in 3D framework has been proposed; which considers the actual curvature of the geocell pockets. An Analytical equation has been proposed to estimate the increase in the bearing capacity of the geocell reinforced soft clay beds. Similarly, a set of equations to estimate the stress and strains on the surface of the geocells subjected to compressive loading were also proposed. This paper will describe the CCS, problems and an application of this data for design of flexible pavement, retaining structure and sloping area.

**Keywords** –Construction cost, flexible pavement, geocell reinforcement, geosynthetic.

### **JCON2021\_CIVIL\_210**

#### **Safety of Suspension Bridge by Using Water Level Sensors**

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**Abstract-** In this study, Bridge safety monitoring system using IOT is developed using the Wireless technology. With the help of Advancements in sensor technology have brought the automated real-time bridge health monitoring system. This system will help prevention in disaster management and recovery. IOT-based bridge safety monitoring system is developed using the Wireless Technology. By the use of wireless sensor nodes, various types of data can be collected like vibration, water level and Bridge weight. These data would also be useful for monitoring and surveillance. The main motto of this paper is to develop a system that can prevent accidents or structural disasters of flyovers and bridges. This study gives the survey of various techniques used to monitor the conditions of the bridges and proposed a system for monitoring continuous structures and an ultrasonic sensor for monitoring the water level in the river to avoid traffic from a bridge in flood conditions using Kalman's Filter algorithm. In case of emergency situations the gates of the Bridge will be automatically closed. The obtained data are transmitted to the server and database for admins to have real-time monitoring of the bridge conditions via mobile telecommunication devices.

**Keywords:** Bridge safety Monitoring, Flood Conditions, Emergency Situations, IOT, Data Analysis



**JCON2021\_CIVIL\_211**

**Reuse of Plastic Water bottle in wall construction and aesthetic purposes.**

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Abstract—Disposal of non-bio-degradable substance has become an issue of major concern now days. Mounds of plastic garbage have been created on earth. Plastic bottles are used to store different substances for consumption and for other uses. Bottles used to package water takes over 1000 years to biodegrade and if incinerated, the produced toxic fumes. So there is a need for environment friendly constructive use of plastic bottles. This report consists of reuse of plastic waste bottle in construction as a brick which is filled with compacted sand or mud and other material, also for aesthetic purposes, method and technique of use, its relative advantages over traditional bricks in this way plastic waste of bottle can be removed and reused safely for construction. The objective of this paper is to introduce the replacing of bricks with plastic bottles and respective benefits in building construction. The detailed comparison of characteristics with conventional bricks, mortar and cost of brick with brick bottle with plastic bottles is done. Today the technology developed in great scale that the utilization of renewable resources is made possible which protect the global environment. Also if technology permits bottles in construction, the carbon emission happens during baking of an ordinary Indian standard bricks can be reduced. Keywords— Plastic bottles, Economical, Bio climatic, Earthquake resistance, Durable, sustainable material, urban wastage, construction material, Innovative wall construction.

**JCON2021\_CIVIL\_212**

**GIS Application in Ground Water Depth Analysis**

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Abstract- Groundwater is a very important resource for the sustainable development. It is the important source of the industrial, agricultural and domestic water supply in India. The present study analyzed the variability in depth to water level below ground level in Ghulewadi area located in Sangamner Tehsil of Ahmednagar District. In this paper an attempt has been made on the application of GIS techniques in Ground water assessment.

### **JCON2021\_CIVIL\_213**

#### **The Structural Audit of RCC Structure by using Non Destructive Test methods**

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**Abstract**-This paper reviews the most common non-destructive testing (NDT) methods of concrete structures as utilized by the structural engineering industry. The fundamentals of NDT methods are explored in regards to their potential, limitations, inspection techniques and interpretations. The factors that influence the success of NDT methods are discussed and ways to mediate their influence are recommended. Reference is made to standard guidelines for the application and interpretation of the discussed NDT methods. NDT of concrete was found to be gaining increasing acceptance as a means of evaluating the strength, uniformity, durability and other properties of existing concrete structures. Perceptions of NDT inadequacy were attributable to lack of understanding construction materials and NDT methods themselves. The intent of this paper is to address these concerns by identifying and describing the most common successful methods of NDT as applied to concrete structures.

**Keyword**- Auxiliary, Well being, endeavour etc

### **JCON2021\_CIVIL\_214**

#### **Effect of Mix Ratio and Curing Water on the Compressive Strength of Oil Palm Shell (OPS) Aggregate Concrete**

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**Abstract**— In this study, the compressive strengths and Modulus of elasticity of lightweight Concrete with oil palm shells as partial replacement of coarse aggregate was presented. Five mixes were investigated; control, which contain granite coarse aggregate only; then four other mixes with 20%, 40%, 60% and 80% granite coarse aggregate replacement by oil palm Shell (OPS) aggregate. Fifteen samples were produced for each mix ratio, given a total of 135 concrete cube specimen for compressive strength tests and another 135 cylinder specimen for cylinder compressive strength tests and another 135 cylinder specimens for indirect tensile test for the determination of modulus of elasticity. In conclusion, after undertaking the laboratory practical's on the OPS using 3 types of water for curing and varying the mix ratios to conform with class M25 grade, the effect of mix ratio and curing showed a tremendous difference but the use of OPS as a lightweight aggregate material was found to be adequate when compared with other materials being used as lightweight aggregate.

**Keywords**— compressive strengths, Modulus of elasticity , aggregate, material , lightweight.

**JCON2021\_CIVIL\_215**

**Effect of Elevated Temperature on Mechanical Properties of Early Age Concrete**

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**Abstract**—concrete is frequently subjected to various adverse environmental effects throughout its service life such as fire and high temperature, its performance starts to decrease at temperatures above 400c. Serious physical and mechanical damage starts to take place particularly above 400c and the performance of concrete decreases due to such impacts.

**Keywords**—high temperature, concrete, compression strength, fly ash, pulse velocity.

**JCON2021\_CIVIL\_216**

**Light Weight Foam Concrete Material**

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**Abstract**—Foam concrete is a type of cellular light weight concrete. It does not contain coarse aggregate. Foam concrete is produce when pre-formed foam is added to cement slurry. The function of foam is to create the voids in cement-based slurry. Foam generated separately by using drill machine fitted with steel wire mesh. First foaming agent is diluted with water then drill machine is inserted in the water and mix it till the perfect foam is formed of stable condition. now a days in the society the cost of constructing the house is so high because of the cost of various building materials is high. In this topic we decided to construct the cost effective building using foam concrete and according that we started the work. the important and necessary material i.e. foaming agent purchase from Gandhi chemicals, budhwar peth, pune and other material like quartz sand, GGBS, Natural sand, fly ash etc. are collected from local authorities. We cast the 3 blocks by using six mixes with natural sand with foam. Coarse aggregate is eliminated in such type of concrete. We Casted three blocks using each concrete MIX.

**Keywords**—Public private partnership (PPP) projects, governance issues and risk management, solution of risk management framework.

**JCON2021\_CIVIL\_217**

**Eutrofication Studies of Bhima River**

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**Abstract-** This project discusses the effects of nutrients on the physical, chemical and biological components of large rivers in the context of both human costs and ecosystem response. In addition to the direct consequences of adding nutrients, such as increased primary productivity and resultant effects on water chemistry, additional interactions also characterize large river nutrient responses. For example, algal community structure is altered leading to proliferation of nuisance taxa, taste and odor problems, increased water treatment costs, increased toxins, and loss of habitat. In addition, nuisance macrophytes (rooted aquatic plants) also increase and affect water chemistry and habitat. As a result of these direct and indirect responses, large rivers suffer impacts to aquatic life and recreational uses. Rivers also function to transport nutrients to downstream ecosystems, and some of the impacts of nutrients on large rivers are transported to downstream lake and coastal receiving waters.

**JCON2021\_CIVIL\_219**

**Integration of Soil Moisture Sensor Based Automated Drip Irrigation System for Sugarcane Crop**

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**Abstract** The soil moisture based automated drip system was integrated and evaluated for Sugarcane crop in year 2021 at Plasticulture Farm of Krishivigyan Kendra, Narayangaon for deciding optimum time for irrigation on the basis of moisture availability in the soil. The soil moisture sensor works on electrical resistivity. As the moisture content of the soil increases, the electrical resistivity of the soil decreases. The value of resistivity changes in to volumetric water content of soil. The sensor sends command to irrigation controller at 1 hour interval. If soil moisture goes down to the threshold value of moisture content then controller starts the pump. While, moisture content reaches at threshold value then system off automatically by micro controller. The results show that when resistance of soil increases the voltage on controller output port was equal or more than 24 VAC which shows starting command for pump. When resistance of soil decreases then sensor indicates optimum moisture availability at that time output voltage of controller was nearly to zero voltage. Which indicate command for system off. The result shows good correlation between values of soil moisture content obtained by gravimetric method and sensor output voltage with a value of  $R^2 = 0.939$ . While, the value of  $R^2$  was also found to be 0.920 which shows good correlation between soil moisture by measured by sensor and soil moisture content by gravimetric method. The result shows that good accuracy of this soil moisture sensor in measurement of soil moisture. The system found very convenient to switch on and switch off the pump when the water is applied, especially when farmer are busy in other agricultural operation. This technique saves large amount wastage of water as well as wastage of power (consumed by water lift pump) and increases yield of Sugarcane crop by maintaining optimum moisture content in root zone during whole crop period.

**JCON2021\_CIVIL\_220**

**Impact of Corona Pandemic on Construction industry**

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Abstract : Since the world is facing the challenge of pandemic covid situation from march 19, there is huge loss to world regarding economy health etc. The infrastructure and construction industry sector which is primarily responsible for Indian growth they also suffering from the damage. The demand of construction project is fallen day by day. In this paper we will study about the different factors comparison in construction industry before and after the pandemic. While low economic activity in other sectors will impact construction services through forward linkages.

Keywords –covid 19, economy, construction industry

# **ELECTRONICS AND TELECOMMUNICATION ENGINEERING**

**JCON2021\_ETC\_301**

**Android Based C19 Warrior Robot**

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**Abstract**—Nowadays smartphone has become the most essential thing in our daily life. And most of the things are based on android application only. Our project describe that without coming in contact with human how to provide service to them. This project is based on android application . The user can install application in their phone and can operate by turning on Bluetooth. Various command can be sent like forward ,backward, left ,right using android phone. Robot has a receiver which can accept those command and move accordingly.

**Keywords**—Bluetooth, Motor, Motor Driver, Arduino, Android, Wireless

**JCON2021\_ETC\_302**

**Increasing Road Safety Using Internet of Things and Machine Learning**

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**Abstract**--- Road Accidents are increasing day by day in our country and the major cause of these accidents is overspending mainly by the youths. As the result the authorities are outnumbered hence there is a need for a system which will help the authorities to manage the roads better. Now-a-days the computers are able to perform many complex task hence we can use complex systems to help the authorities to apprehend the offenders and spread awareness. In this paper we analyze the results of such a system is an integration of Internet of Things (IoT) and Machine Learning which will analyze the patterns in the given area and make a detailed report of common offenders, their patterns etc. This report will then be used by the authorities to penalize the offender and focus on the area of concern mentioned in the report to effectively reduce the accidents and manage the safety on the roads.

**Keywords**--- Road Accidents, Internet of Things (IoT), IR Sensors, Database, Machine Learning, Over speeding, Training, Safety, Penalize.

### **JCON2021\_ETC\_303**

#### **FPGA Implementation of Advanced Encryption Standard**

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Abstract – Security is a crucial parameter to be recognized with the improvement of electronic communication. Today most research in the field of electronics communication includes look into on security concern of communication. At present most by and large consumed and recognized standard for encryption of data is the Advanced Encryption Standards. AES was transformed to supplant the developing Data Encryption Standard. The AES calculation is fit for handling cryptographic keys which are of 256, 128, 192 bits to encode & unscramble data in squares of 128 bits. The center of the calculation is made up of four key parts, which manage 8 bit data pieces. The whole 128 bit data to the calculations is dealt with into a 4 x 4 grid termed a state, to obtain the 8 bit square. Considering the complex nature of advanced encryption standard (AES) algorithm, it requires a huge amount of hardware resources for its practical implementation. The extreme amount of hardware requirement makes its hardware implementation very burdensome. During this research, a FPGA scheme is introduced which is highly efficient in terms of resource utilization. In this scheme implementation of AES algorithm is done as a finite state machine (FSM) VHDL is used as a programming language for the purpose of design. Data path and control unit are designed for both cipher and decipher block, after that respective data path and control unit are integrated using structural modeling style of VHDL. Xilinx-ISE\_14.2 software is being used for the purpose of simulating optimizing the synthesizable VHDL code. The working of the implemented algorithm is tested using VHDL test bench in the form of Xilinx ISE simulator and resource utilization is also presented for a targeted Spartan3e XC3s500e FPGA.

Keywords— Xilinx ISE14.7i, VHDL, FPGA, USB to serial converter, pc.

### **JCON2021\_ETC\_304**

#### **Vending Machine For Masks And Sanitizer**

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Abstract - In vending machine for sanitizer and mask project, we have built vending machine using Arduino Uno which is interfaced with a IR sensor, a LCD display and buzzer. The IR sensor detects when the coin is accepted. LCD display shows the availability of masks and sanitizers. Buzzer connected to Arduino gives an alarm indication. Whenever quantity is less, buzzer is turned off whenever Mask and Sanitizer is fulfilled. We have also interfaced DC motor, switch.

Keywords: sensors, DC motor, mask,



**JCON2021\_ETC\_305**

**Smart Garbage Monitoring System**

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Abstract - Waste is a crucial issue, which must be tackled smartly. the main purpose is to develop system which use the information collected from sensors to manage the collection of waste .In the purpose system Dustbins are located in the several areas of the city/village are connected to Internet which is in the wirelessly, they equipped with sensors which collects the info about level of collected waste in the Dustbin. Then the dustbin sends the information to center of web portal using the WIFI module. If the dustbin get filled above than threshold level then it indicates “Dustbin get full”,otherwise indicates the level of garbage present in the dustbin.

Keywords—Waste, Dustbin, IOT

**JCON2021\_ETC\_306**

**Automated Soil less Farming Method for Root-Type Crops**

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Abstract - The aim of this paper is to make a totally automated hydroponics which will produce year round crops, using sensors and actuators. Temperature in water and air, relative humidity, water level, nutrient level and pH are all measured with diereent sensors. Though only water level, pH and nutrients are going to be regulated. The greenhouse is going to be counting on a hydroponic growing technique, meaning that the growing is soilless and can be wiped out water. This makes measuring and controlling said levels easier and also minimizes water waste and makes for a more environmental system. The purpose behind the paper is on supervised pH and nutrient levels of the water. The system has shown to be stable and self regulating within the desired intervals for nutrient concentration and pH for growing basil.

Keywords: Hydroponic, sensors, actuators.

**JCON2021\_ETC\_307**

**UV chamber- Covid-19 Fighter**

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**Abstract**—Since Covid-19 is getting one of the major issue of our life it is getting basic task in our life to sterilize things we use continuously or parcels even food is also not safe it is needed to sterilize and we can't sterilize everything by sanitizer spray as it had alcohol which is also affects health. So we have come with UV chamber that uses ultraviolet light to sanitize things we use in day to day life or we receive from strangers. It is totally automated system that reduces our touch and reduces changes of getting in contact with Covid-19. Also airborne microbes settle on these objects we use, causing an increased risk of infection spread. In this paper we professed with a great sterilization technique which is totally automated with low cost and high speed controller. UV chamber uses UV-C technology to achieve great sterilization of any object in just a minute. This device incorporates UV-C exposure and ensuring complete sterilization of everyday objects placed within the appliance. Actually it is one of the smart sterilization technique

**Keywords**—UV chamber, sterilization technique, Covid-19, Automated system

**JCON2021\_ETC\_308**

**E-Rakshak the Border Surveillance Robots**

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**Abstract**—As we know the surveillance is a difficult task of International border areas. It isnot possible by the border guarding forces to watch the border at each and every moment. In this case the essential requirement is to have a system which automatically detects trespasser in the border and report nearby board security control unit. Nowadays, to carry out risky jobs the robots are used that cannot be done by the soldiers. In this present work, a Raspbian operating system-based spy robot platform with remote monitoring and control algorithm through Internet of Things (IoT)has been developed which will save human live, reduces manual error and protect the country from enemies. The system comprises the Raspberry Pi (small single-board computer), camera, PIR sensor and shooting gun. The Raspberry Pi is the brain of the system. Android app control the moving to a specific direction and camera for live streaming videos of required areas for tracing and attacking. And the PIR sensor are activated depend on external stimuli via IoT. The user is able to access the system with control buttons on the android app from control room.

**Keywords**—Raspberry pi, IOT, PIR Sensor, 5 MP PiCamera.

**JCON2021\_ETC\_309**

**Image processing based fire detection using raspberry pi**

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Abstract— :-Based on the above fire flame color features model, regions with fire-like colures are roughly separated from each frame of the test videos. Besides segmenting fire flame regions, background objects with similar fire colures or caused by colour shift resulted from the reflection of fire flames are also extracted from the image during the above color separation process.

# **COMPUTER ENGINEERING**

### **JCON2021\_COMP\_401**

#### **Anti Corona System Using Machine Learning**

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**Abstract-**The design illustrate shows the preventive measure that can be taken during the COVID-19 pandemic in the whole world. Sanitizers have become the most significant product right now. By the new rules and regulations given by WHO strong sanitization is needed to survive. The design introduces the solution for the problem stated. The design gives an automatic hand sanitizer and temperature sensing system, to keep the hand sanitized, without contacting with the sanitizing machine. The temperature sensor gives the body temperature of the person without touching. In the wake of the current pandemic. The breakout of COVID-19 across the world has headed researchers, healthcare department and government authorities to work together and find an optimum solution to get rid of the disease and restrict its spread. The purpose of this research work is creation of awareness about public safety and solutions by ways of health monitoring system, which will count successfully the body temperature along with heart rate of a person and hence create a secure environment around. Firstly, MLX90614 sensor is used to measure the temperature as well as MAX30100 pulse sensor to monitor the heart rate, which is than interfaced with controller to control and monitor the data for smart communication. Also touchless sanitizing device can be used to take preventive measures which helps to sanitize the hands to decrease and till some extent kill the harmful virus. The project basically focuses on the safety measures to be incorporated post lockdown. So, it's very functional to place the health monitoring system with touchless sanitizer device at the entrance of any building.

**Keywords:** Corona, Sanitize, sensor network, COVID-19, touchless sanitizing.

### **JCON2021\_COMP\_402**

#### **Faulty PCB Detection System**

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**Abstract-**A robotized testing system for Printed Circuit Board (PCB) is jumped at the chance to get the creative advances in PCBs plan and gathering, takes out explicit points and a while later gives snappy, quantitative, and dimensional weights. It diminishes the testing time and gathering cost as human examiners decisions are lacking, moderate and extravagant. Accordingly around there, advanced picture preparing can be utilized chiefly for the identification of flawed parts or missing segments. This system essentially oversees assessment to recognize broken PCB. Computerized camera is used in automated visual evaluation system that gets image of every model PCB thing. This thought accelerates and accuracy, takes out human goofs which are ordinary in quality testing and besides crushes the inadequacy in the current system. Thusly the benefit can be extended by overriding manual testing with the proposed thought.

**Keywords—** “Image Processing, Printed Circuit Board, Defect Detection, Edge Detection, Classification system”

**JCON2021\_COMP\_403**

**Enhanced Security for ATM Machine with Facial Recognition and OTP with Shuffle Keypad Features**

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**Abstract-** In order to provide security solutions to the people for ATM by using LRR algorithm for face detection and virtual shuffle keypad for entering password is suggested in this paper. In existing system unknown person can misuse other users ATM card this is not more secure. In this paper the unknown user cannot misuse other users ATM card because of using facial detection algorithm. The system captures the photo of user and match it with the users photo which is saved in bank account of that user. If captured image and the users bank account image are matched with each other then the user is valid user and proceed to next step otherwise it will show invalid user. If the ATM card user wants to give card to other then others can use with the help of guest user option available on machine by using OTP. The OTP will send on the ATM card users mobile then user can share it with other person. After that using shuffled keypad feature user can enter the OTP and can able to do the transactions successfully with security.

**Keywords –** “ATM card, shuffled keypad, facial detection, transaction, LRR”

**JCON2021\_COMP\_404**

**Influential Node Tracking on Social Media Using Greedy**

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**Abstract -**An interpersonal organization locales assumes vital part for spreading the data and impact as entire world close by. There is something fundamental to discover little arrangement of influ-ential individuals in an informal organization to such an extent that focusing on them at first. It will expand the spread of the impact yet the issue is that to finding the most persuasive hubs in network. There is one Algorithm called as Greedy calculation utilized for mining top-K compelling hubs. It has two parts: partitioning the post of interpersonal organization into a few networks by considering data dissemination and choosing networks to discover powerful hubs by a unique programming.

**Keywords—** Social network, Photo privacy, Support vector machine, Collaborative, Security models

### **JCON2021\_COMP\_405**

#### **Woman Safety Using Arduino**

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Abstract - Nowadays, there is evidence that women are being abused then their accomplishments. Women feel unsafe to drive on their own at odd hours. There are several android apps that have been developed for women's welfare yet it's not always easy to take our cell phones everywhere we go, or even we fail to carry them. The new scheme is an effort to address the issues of women's welfare. The scope of the system is to create a mobile interface that will support women in such emergency situations.

Keywords- Women, Safety, Arduino, GSM, GPS, Temperature Sensor, Pulse Sensor, Panic Button, safety model.

### **JCON2021\_COMP\_406**

#### **Soil Classification and Suggestion of Suitable Crop Using Machine Learning**

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Abstract - Soils are perplexing combinations of minerals, water, air, natural matter, and innumerable living beings that are the rotting survives from once living things. Soils fill in as media for development of a wide range of plants We can say soil is an important ingredient of agriculture. There are a few sorts of soils and each kind of soil can have various types of highlights and various types of yields develop on various sorts of soils. We must know which type of our soil is go better in our soil. We can apply AI procedures to group soil and to anticipate the yield reasonable.

Keywords-“Soil series, Land type, Chemical feature, Geographical attribute, machine learning, KNN, SVM, Regression”

### **JCON2021\_COMP\_407**

#### **Identification of Mishandling of Data Using- Data Mining**

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Abstract – Data mining plays a key role in identification of mishandling of data. There is a various number of a different algorithm in previous research papers like virtual identifier, pruning strategy, support vector machines, and apriori algorithms. “VID” (Virtual ID) is to find the relationship between the record. Then the “Apriori algorithm is used for around six hundred seconds to detect a mail bomb attack. Which is quite fast as we wanted and it is very useful to achieve our goal. We used the ‘mishandling mapping analysis based on the “KNN” (K-Nearest Neighbor) algorithm to simplify this process and mishandling mapping is very essential for the research area to concentrate on because we can identify the most frequent mishandling occurring zone with the help of data mining techniques. we use the following steps to reduce the mishandling rate:1) Collect mishandling data Group data.2) Clustering.3) Forecasting the data.

Keywords:- Data Mining, Data Security, System Protection, Shared Location Security, Cyber Security, User Privacy, Mining, apriori

### **JCON2021\_COMP\_408**

#### **Hybrid Approach Recommendation**

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**Abstract**— Recommending technique is an extensive segment. It take part in e-commerce stores by suggesting useful recommendations to the users. It based on the users activities. Users are constantly come with circumstances in which they have many choices to pick and need help exploring or sorting down the possibilities. A suggestion helps user's to find gripping content in a large collection. First stage of recommendation is Candidate generation. The system shows a set of list with suitable possibility. There are two approaches for candidate generation- content-based filtering and collaborative filtering. This paper helps to proposes system which makes use of both the approaches for better outcomes.

**Keywords**— recommendation, e-commerce, hybrid approach, filtering, etc.

### **JCON2021\_COMP\_409**

#### **Security and Evidence based Ranking System For Mobile App**

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**Abstract**- As the number of mobile applications grows in day-to-day life, it is important to keep track of the applications are secure and which are not. One cannot determine how secure and valid each application is only based on the feedback listed for each application. Therefore it is important to keep track and build a framework to ensure that the applications present are genuine or not. The goal is to build a framework by using sentimental analysis and data mining to detect fraud apps before users downloads. Sentimental analysis is intended to aid in the identification of the emotional tones behind words spoken online. This approach is useful in tracking social media and helps to get a brief understanding of the opinion of the public on certain issues. On the internet the user can't always get right or real reviews of the product. We will search for nostalgic comments from users about multiple applications. The reviews are probably false or real. Analysing the ranking and feedback with input from both users and administrators, we can decide whether the product is genuine or not.

**Keywords** – fraud app, pre-processing, CountVectorizer, apply ML model, naïve Bayes, natural language pre-processing etc.



**JCON 2021\_COMP\_410**

**Moisture Detection Using IOT**

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Abstract – India is agriculture country. In India 70 To 80% people are working in the farm they doing farming. So this technology is very important for helping the farmer. In this application to control water supply and to detect disease prevention. This system are generated for provide the knowledge to the farmer and this is very helpful for the detect the disease and how to prevent it .And this all system are the user friendly. Our system aim is to create the hybrid farming and and save time and resource. The range of location and climatic effects upon agricultural cultivation, along with different environmental parameters over time makes the farmer’s decision-making method additional difficult and needs further actual knowledge. In this process wireless sensor networks use for checking moisture level of soil and make a water motor on/off . And also checking weather parameters and combining this info with a user-customized service could modify farmers to use their data in an economical manner so as to extract the most effective results from their agricultural culture. The system will support to farmer demands and the collected info could represent for further use, so this info use for decision making. In this system farmer use moisture sensor that means IOT platform and doing all process or all activity.

Keywords –Classification Rule, K Nearest Neighbor (KNN), Density based clustering , moisture level, humidity level.

**JCON2021\_COMP\_411**

**Agro Expert Using Google API**

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Abstract— Agriculture is the backbone of Indian economy. Mostly crops are loss due to the erroneous selection of the crop, climate change. The farmers are generally not aware of the requirements of the crops. i.e. The minerals, soil moisture & other soil requirements one more problem that a farmer generally encounters is the pest & diseases that can affect the crops they grow which they are generally unaware of in an early stage. This are the problems of farmer is addressed in our paper and we have tried to solve it with the help of Agro Expert using Google API system by the help of our model. We predict the suitable crop to the farmers and also detect the pest and may affect as suggest the pest control technique. In this paper we have applied collaborative filtering algorithm, aprori algorithm, linear regration prediction technique.

Keywords- Indian Agriculture, Crop Selection Method, Machine Learning Techniques.

### **JCON2021\_COMP\_412**

#### **Group data sharing Using Cloud Computing**

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Abstract - Cloud computing is said to be the service oriented computing technology, which are affordable and flexible over the internet. In past few years the cloud has become more matured and provided many services, one of the primary service is data sharing in Group, where the data can be easily shared from one member to another. However, while sharing the data security is one of the primary concern. In past several methodology has been proposed. However, these methods lacked from the feasibility. Hence, in this paper we have propose methodology is based on the selection scheme. Here General Group Key is generated and moreover General Key agreement protocol is decentralized based model where the data are controlled by the owner within the same group. Moreover, the proposed methodology is evaluated by analyzing the comparative analysis based on the various number of parameter. Result Analysis suggest that our methodology simply outperforms the existing one.

Keywords- : cloud Computing, security, Group data sharing.

### **JCON2021\_COMP\_413**

#### **Self-Learning IQ Test Game**

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Abstract: A self-test of intelligence is a psychological test that is someone can take to measure one's or own intelligence. As with other intelligence tests, a self-test of intelligence normally consists of a series of the verbal and non-verbal intellectual tasks and puzzles. These tests usually give the taker instructions on how to complete the tasks or steps and offer a performance score after the test has been completed. These self-tests can be performed in various ways that are quick, easy, and can be done at home or anywhere. Web sites on the internet, apps for mobile devices, and one or more books are popular choices for taking these tests for intelligence. There are two methods that one can look at intelligence: either as an intrinsic, an innate and static characteristic of a person or as a characteristic that is acquired which can be influenced by the environment or that can be implement on. These opposing points of view are part of a more general real nature vs. nurture debate that the dates back to Ancient Greeks like Plato and Aristotle. Implicit theory of intelligence can be at the basis of the point of view and decided whether or not the results of a self-test of intelligence are considered definitive or can be improved upon may depend on this.

### **JCON2021\_COMP\_414**

#### **An IOT Based Bank Locker High Security System**

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Abstract-Security Systems plays a very important role in today's modernized industrialized era. Throughout our life, the hard earned assets and valuables things are expected to be safeguarded under certain security features which meet the inquest of the requisite. It is basically designed in order to avoid the risk of vulnerabilities to our valuable items. In this technological world, the system includes biometrics along with digital code lock which response in the way for matching or mismatching the code. Any mismatch to the series of authentication during verification is done raises an alert sound. For biometrical analysis Iris scanner and vein detector is being used which will be monitored with the help of microcontroller through the sensors of the biometric sensors. A keypad will be used for the registered codes such as unique passwords and registered number followed by a wireless motion detector. Any movement occurs to the output of wireless motion detector will be easily sensed by the microcontroller resulting an alert sound. For best assurance, this process of secured authenticity will be active 24 x 7 that includes at night time as well.

Keywords— Iris, Vein, locker, Scanner, Microcontroller, Biometrics, Sensors

### **JCON2021\_COMP\_415**

#### **E-Healthcare using QR Code**

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Abstract—Nowadays, we can see each and every details of every person are stored centrally in database. For Example Bank details, Aadhar card details. But we cannot see this type of thing implemented or used in healthcare system. The main problem in today's date is we are not having any centralize database of individual person, and because of that it's impossible to require proper precaution for prevention of any viral disease. Next is when Dr. give any prescription to patient do not have any record of that prescription. So next time if Dr. wants to take any past reference of same patient than it is not possible. So when we have this system, there are two type of users 1st is Admin which will be any authority of health ministry and another one is doctors or any laboratory. Admin have all the access to the system. Doctor can record every minor details of every case of patient which can be refer any time. Users All people, Doctors, Medical Store, Laboratory. People can do registration with basic details and get unique health id. Doctors can do registration with valid proof. Same medical store and lab will do sign up with proper valid proof. Patient doesn't have any records of their past health history, which can be now stored online so patient can access it anytime for reference. In any personals lifetime, he/she visits to many different doctors and one Dr is unaware about another doctor's past treatment. But now after this project every thing is synchronized and well managed. Potential Impact Potential Impact(is very huge) of this definition is that now after development of this project, Doctors can keep record of every patient's health, Patient can manage all cases of his/her lifetime. Concern authorities can analyse the info and take appropriate action from stored data. One Dr. can easily understand past doctor's treatment and thus patient will get accurate treatment Gradually this leads to decrease death ratio of people because of unknown data of past. And if in case the patients causes death then the health ministry authorities can take appropriate actions like they can delete the data of the patient from database or arrange the data and update the data.

Keywords: Healthcare, Smart card, Cryptography, Medical record, Computer Networks, Security, Unauthorized access, Keylogging, QR Code.

**JCON2021\_COMP\_416**

**Demand Forecast using Machine Learning**

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**Abstract**— In the manufacturing industries, product manufacturing has become a complex task as random changes occur in the customer's requirements. While dealing with changing requirements it can be lead to extra production or it may tends to a shortage. The variations in the requirements of the product make a huge impact on industrial resources like inventory, manpower, services, time, and cost. Predicting customer demand is very necessary for dealing with those randomly changing requirements. Demand forecasting will help manufacturers for determining accurate optimal supply rate, requirements and to build subsequent resources which will minimize expenses. In our system, we are exploring the datasets to identify the key parameters which play a valuable role in the demand forecasting of an industry. We are using a supervised learning algorithm to predict the demand which will enhance production management. Long Short-Term Memory (LSTM) which is an artificial RNN will be used for analysing and predicting results. The different modules of datasets will be created and trained for more efficiency of the result. Then the results will be shown using the Time Series Charts which will help for an accurate understanding of prediction.

**Keywords**— Inventory, Optimal Supply Rate, Demand Forecasting, Supervised Learning, LSTM, Time Series Chart.

**JCON2021\_COMP\_417**

**COVID-19 Epidemic Analysis using deep learning**

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**Abstract**- corona virus (COVID-19) is an irritation infection from another infection. The infection causes respiratory disease (like flu) with indications, for instance, cool, hack and fever, and in logically genuine cases, the issue in relaxing. COVID-2019 has been seen as an overall pandemic and a couple of assessments are being driven using distinctive numerical models to foresee the presumable headway of this epidemic. These numerical models subject to various components and examinations are needy upon likely tendency. Here, we introduced a model that could be helpful to foresee the spread of COVID- 2019. We have performed direct relapse, Multilayer perceptron and Vector auto regression strategy for want on the COVID-19 Kaggle information to envision the epidemiological case of the infirmity and pace of COVID-2019 cases in India. Foreseen the expected examples of COVID-19 impacts in India reliant on information accumulated from Kaggle. With the regular information about affirmed, demise and recuperated cases across India for over the time length helps in foreseeing and assessing the not all that removed future. For additional evaluation or future point of view, case definition and information mix must be kept up determinedly.

**Keywords**— covid-19, preprocessing, classifier algorithm ,feature extraction Convolutional neural network(CNN)etc

**JCON2021\_COMP\_418**

**E-Ration Distribution System by QR-Code**

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Abstract – In this paper, we have proposed a Smart Ration Card System using Quick Response Code (QR Code). The existing conventional Ration Card System consists of three categories of cards based on the user's income and the information is updated manually which leads to unfair practices. In this system, the QR Code contains the URL and an Identification Number of the customer which points to the record in the database. The QR Code can be scanned using a Smart phone. On scanning the QR Code, the user's personal details like name, phone number, address along with family member details, is displayed on the computer. Further, the desired grocery items are distribute to the user. If user get good quality grocery items that is ok but if user get bad quality grocery items then user can register complaint's to the Tahsildar and Tahsildar take legal action on food distributor. This Smart Ration Card System will ensure transparency in the system and hence prevent the exploitation of masses.

Keywords – “QR code, Scanning, grocery, distribute, card”

**JCON2021\_COMP\_419**

**Depression Detection by Analyzing**

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Abstract – Depression is one of the serious mental health Problem. This site provides a platform for users to share their life events, motions, everyday routine. Human emotions like depression are inner sentiments of human beings which expose actual behaviors of a person. Analysing and determining these types of emotions from people's social activities in virtual world can be very helpful to understand their behaviours. Existing approaches may be useful for analysing common sentiments, such as positive, negative or neutral expressions. However, human emotions, such as depression, are very critical and sometimes almost impossible to analyse using these approaches. By analysing the post of user this application will be check whether the user is under depression or not. If system find a user who is depressed then system will shared a motivational post to that particular user

Keywords:- Depression, mental health, social media, Data Mining

**JCON2021\_COMP\_420**

**Identification Novel Approach For Sql Injection Attacks**

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Abstract- Structured query language (SQL) may be a text language that permits manipulating the information hold on within the info through the commands like INSERT, UPDATE and DELETE etc. Code injection technique within which hacker manipulates the logic of SQL command to get access on the info and different sensitive info. Most common vulnerability gift on the network. SQL injection could be a code injection technique, accustomed attack data-driven applications, during which malicious SQL statements area unit inserted into associate entry field for execution (e.g., to dump the info contents to the attacker). The foremost common reason for info vulnerabilities could be a lack of reasonable care at the instant they're deployed. During this paper, we tend to propose a novel approach Self-Protecting databases from attacks, a mechanism for software system attack bar, which may conjointly assist on the identification of the vulnerabilities within the applications. To develop a secure path for group action done by the user AES algorithm which is an (Advanced Encryption Standard) cryptography technique, the group action and user account details is created secured.

Keywords: Novel Approach, AES algorithm, Machine learning algorithm, Naïve Bayes Algorithm[1].

**JCON2021\_COMP\_421**

**Privacy Preserving in Online Social Network for Control of Photo-Sharing**

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Abstract-Photo sharing is a charming component which progresses Online Social Networks (OSNs). Unfortunately, it might release users' security if they are allowed to post, comment, and mark a photo openly. In this project, we try to address this issue and study the situations when a user shares a photo containing individuals other than himself /herself. To anticipate possible security spillage of a photo, we designed a system to enable each individual in a photo aware of the posting activity and share in the decision making on the photo posting. In our system Photo owner will have complete control over their personal image reposting by another user.

Keywords- Social-network, photo-privacy, support vector machine, collaborative learning security model.



**JCON2021\_COMP\_422**

**Smart Video Surveillance System Based On Machine Learning**

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Abstract— Now a day's million monitoring cameras have been equipped for surveillance systems in all over world. So we have implemented video surveillance by giving video contents containing early fire events detection, abnormal activities and smart parking system and crowd survey. We have overcome existing drawbacks of post investigation techniques of video surveillance systems by providing pre alert generation system. Our work is based on machine learning techniques for video analysis with better performance and event detection with advantages of alert generation. Video surveillance system has become a important part in the security and protection of modern cities. Since Video surveillance system has become a critical part in the security and protection of modern cities, since smart monitoring cameras equipped with intelligent video analytics techniques can monitor and pre-alert system by capturing abnormal activity and events. Recent years, more and more video surveillance devices are deployed as the increasing demands on public security and smart city.

Keywords— Smart Video Surveillance, Fire Detection, Deep neural network

**JCON2021\_COMP\_423**

**Parkinson's Disease Prediction Using Machine Learning**

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Abstract-Parkinson's disease is caused by the breakdown of dopamine-secreting cells in the nervous system, and many methods have been used to diagnose its severity and presence. A person's medical history and a neurological test are used to diagnose PD. Another significant feature of Parkinson's disease is improvement after starting treatment. As a result, this research field has gotten a lot of coverage. Until now, researchers have used a variety of methodologies, including monitoring using the UPDRS Scale, using smartphone inbuilt sensors, performing various physical tasks, and so on. This paper summarizes all of the above approaches and introduces some new ones that take into account specific factors and assumptions and apply them to multiple machine learning models while displaying inter-model comparisons. It also discusses the progress and difficulties. We end with a comprehensive review of the effect of a variety of approaches on a variety of articles, journals/venues, and subtopics.

Keywords- CNN, Image-Processing

**JCON2021\_COMP\_424**

**PERFORMANCE EVALUATION OF EVACUATED SOLAR TUBE COLLECTOR USING NON-EDIBLE OIL AS WORKING FLUID**

Dattatray Galhe, Dr. Amol Ubale, Dr. S. Chakradhar Goud

Abstract - At constant drying air temperature, as one of the applications of solar collector, the drying rate increases with the increase in drying air flow rate and consequently the drying time decreases with the increase

in drying air flow rate. But the drying rate does not vary much as a function of air flow rate. This influence is less important than the drying air temperature. Also, it is observed that sometimes, drying rate decreases, which can be increased by forced air circulation. Hence the design of Solar Collector System is very much important, as the primary working fluid temperature and flow rate depends on it. So, the scope is available for developing a good Evacuated Tube Solar Collector (ETSC) System. Heat gained in the collector is depends on the characteristics of the working fluid. In this research work Non-edible (engine oil) is used as a primary working fluid instead of conventional working fluid water/air. Hence it is important to study its performance to enhance the efficiency of the solar system. In this work the performance of both working fluids (Engine oil and Air) are studied experimentally as well as analytically and compared. This efficient system can be used for various domestic, agriculture, industry and in food drying applications.

Keywords: Flat Plate Collector; Phase Change Material; Evacuated Solar Tube Collector; Non-edible Oil; Thermal Efficiency.

**JCON2021\_COMP\_425**  
**Moisture Detection Using Iot Technique**

Tushar Gadge, Mahesh Patil,  
Rutik Thorat, Prof. Kokate S.R

Abstract - Foam concrete is a type of cellular light weight concrete. It does not contain coarse aggregate. Foam concrete is produced when pre-formed foam is added to cement slurry. the function of foam is to create the voids in cement-based slurry. Foam generated separately by using drill machine fitted with steel wire mesh. First foaming agent is diluted with water then drill machine is inserted in the water and mix it till the perfect foam is formed of stable condition. now a days in the society the cost of constructing the house is so high because of the cost of various building materials is high. In this topic we decided to construct the cost effective building using foam concrete and according that we started the work. the important and necessary material i.e. foaming agent purchase from gandhi chemicals, budhwar peth, pune and other material like quartz sand, GGBS, Natural sand, fly ash etc. are collected from local authorities. We cast the 3 blocks by using six mixes with natural sand with foam. Coarse aggregate is eliminated in such type of concrete. We Casted three blocks using each concrete MIX.

Keywords: Public private partnership (PPP) projects, governance issues and risk management, solution of risk management framework.

**JCON2021\_COMP\_426**  
**Android Based C19 warrior Robot**  
Hiral Parmar, Lohote Prasad, Prachita Hasebe,  
Prof.Sushma Patwardhan

Abstract - Nowadays smartphone has become the most essential thing in our daily life. And most of the things are based on android application only. Our project describe that without coming in contact with human how to provide service to them. This project is based on android application . The user can install application in their phone and can operate by turning on Bluetooth. Various command can be sent like forward ,backward, left ,right using android phone. Robot has a receiver



which can accept those command and move accordingly.

Keywords: Bluetooth, Motor, Motor Driver, Arduino, Android, Wireless

**JCON2021\_COMP\_427**  
**Faulty Pcb Detection System**

Salunke Purva A, Sherkar Shubhangi N. , Arya C.S.

Abstract - A robotized testing system for Printed Circuit Board (PCB) is jumped at the chance to get the creative advances in PCBs plan and gathering, takes out explicit points and a while later gives snappy, quantitative, and dimensional weights. It diminishes the testing time and gathering cost as human examiners decisions are lacking, moderate and extravagant. Accordingly around there, advanced picture preparing can be utilized chiefly for the identification of flawed parts or missing segments. This system essentially oversees assessment to recognize broken PCB. Computerized camera is used in automated visual evaluation system that gets image of every model PCB thing. This thought accelerates and accuracy, takes out human goofs which are ordinary in quality testing and besides crushes the inadequacy in the current system. Thusly the benefit can be extended by overriding manual testing with the proposed thought.

Keywords: "Image Processing, Printed Circuit Board, Defect Detection, Edge Detection, Classification system"

**JCON2021\_COMP\_428**

**Parkinsons Disease Prediction Using Machine Learning**

Pandit Tejas Vinayak, Nalawade Samruddhi Vishwanath, Pathan Sajid Gani,  
Mrs. Gore Swati

Abstract - Parkinson's disease is caused by the breakdown of dopamine-secreting cells in the nervous system, and many methods have been used to diagnose its severity and presence. A person's medical history and a neurological test are used to diagnose PD. Another significant feature of Parkinson's disease is improvement after starting treatment. As a result, this research field has gotten a lot of coverage. Until now, researchers have used a variety of methodologies, including monitoring using the UPDRS Scale, using smartphone inbuilt sensors, performing various physical tasks, and so on. This paper summarizes all of the above approaches and introduces some new ones that take into account specific factors and assumptions and apply them to multiple machine learning models while displaying inter-model comparisons. It also discusses the progress and difficulties. We end with a comprehensive review of the effect of a variety of approaches on a variety of articles, journals/venues, and subtopics.

Keywords:- CNN, Image-Processing

**JCON2021\_COMP\_429**

**Depression Detection By Analyzing Posts Of Users OnWetalk**

Tanuja Konde, Shweta Hande, Surbhi Kawade, S.B. Jadhav

Abstract - Depression is one of the serious mental health Problem. This site provides a platform for users to share their life events, motions, everyday routine. Human emotions like depression are inner sentiments of human beings which expose actual behaviors of a person. Analysing and de-termining these types of emotions from people's social ac-tivities in virtual world can be very helpful to understand their behaviours. Existing approaches may be useful for analysing common sentiments, such as positive, negative or neutral expressions. However, human emotions, such as depression, are very critical and sometimes almost impos-sible to analyse using these approaches. By analysing the post of user this application will be check whether the user is under depression or not. If system find a user who is de-pressed then system will shared a motivational post to that particular user.

Keywords:Depression, mental health, social media, Data Mining.

