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Live Project (CE) - 2020-21

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HOD, (CE)

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ISO 9001:2015
Certificate No :-QMS/22MO828

Certificate of completion

TO WHOM IT MAY CONCERN

This is to certify that **Mr. Laxman Kulsange**, a student of JDCOEM, Nagpur has successfully completed his project in online mode the titled of project **"Effect of Polypropylene Fibre and Glass Fibre on Concrete "** at our Organization with reference to the partial fulfilment of the requirement of the Degree course of Civil Engineering for RTMNU/JDCOEM Nagpur.

All necessary details were provided from our side for the execution of this project.

We wish him a very best in all his future endeavours.

Thanking you,

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Prophetor

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sdstonesengineering@gmail.com, info@sdstonesengineering.com
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SD ENGINEERING

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Certificate No :-QMS/22MO828

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This is to certify that **Mr. Harsh satpute**, a student of JDCOEM, Nagpur has successfully completed his project in online mode the titled of project **"Effect of Polypropylene Fibre and Glass Fibre on Concrete "** at our Organization with reference to the partial fulfilment of the requirement of the Degree course of Civil Engineering for RTMNU/JDCOEM Nagpur.

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Certificate No :-QMS/22MO828

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TO WHOM IT MAY CONCERN

This is to certify that **Ms. Nikita Padole**, a student of JDCOEM, Nagpur has successfully completed his project in online mode the titled of project **"Effect of Polypropylene Fibre and Glass Fibre on Concrete "** at our Organization with reference to the partial fulfilment of the requirement of the Degree course of Civil Engineering for RTMNU/JDCOEM Nagpur.

All necessary details were provided from our side for the execution of this project.

We wish him a very best in all his future endeavours.

Thanking you,

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This is to certify that **Mr. Amongh Bawankule**, a student of JDCOEM, Nagpur has successfully completed his project in online mode the titled of project **"Effect of Polypropylene Fibre and Glass Fibre on Concrete "** at our Organization with reference to the partial fulfilment of the requirement of the Degree course of Civil Engineering for RTMNU/JDCOEM Nagpur.

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CSE Student Live Project Details

Date: 14/07/2020

Title: "Android Application for Medicine Availability and Location Finder"

Abstract

In the recent times, the World Wide web has the drastic effect on the way people used to do the business in a standard way. Individuals can financial institution, oversee ventures, demand various items, and acquire information on an unbounded variety of points on the internet. It is not a good sign that, such a boost to the technique is not contributing to the development and prosperity of the new entrepreneur. It is also disappointing that the pharmacy business failed to take gain of this fortunate ruin to modernize a standard limit —prescription agreement. Various web drug stores provide medium-term delivery, enabling customers to hold a strategic distance from the deferral of regular mail. Web medicate stores can offer protection that is regularly ailing in a standard drug store. In any case, there is need to consider fundamentally the moral standards in the usage of digital drug. The online medical stores have induced administrative and checking activities at the government, and expert affiliation stages. The closeout of e medicines in the global framework is possibly perilous and needs universal guidelines. Here is an outline of online drug stores, their latent advantages, the affiliations engaged with controlling these destinations, and the enormous discussions including on the web drug stores.

Summary

The web has progressed into a self-sorting through media, prepared for different co-activities inside. Now a day's e-commerce websites have large quantity of products consists of cloths, jewellery, footwear and drugs which are marketed and sold.

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The main cause of marketing and advertisement of the drugs on electronic platform is the unavoidable competition and boom in the e-economy. The prime reason is the anarchic structure of the e-market which shows on of the type i.e., either quality difficulties or legitimate. Because of the customer, doctor and controller point of view, these kind of extensive challenges are unavoidable. Among the various business practices that are as of now thriving in this condition are e-Pharmacies, giving a unification of items suppose for instance wellness and gloriousness items similarly as doctor prescribed medicines. A couple of pharmacies simply distribute the drugs through a significant prescription, some give online gatherings to embracing and administering medicines, and some allocate medications without a prescription. Number of reasons which compelled the patients to the use of the e-platform looking for therapeutic consideration. It is going as a subsequent feeling or a second expert for distracted patients. Also, into patient issues it offers information, similarly as the prescriptions that could fix them. Now a day there are numerous types of website or e platforms for selling medicines over the internet. In the initial stage, the e-medical stores were had the autonomous Internet association. In such cases, there were no physical drug stores available for the clients to visit. This initial assembling incorporates the pharmacy benefits the managing arm of the prosperity plans. This can also have effect on deliver picked organizations to the non-member beneficiary. Secondly, this e-medical stores can also act as a "ticks and mortar" drug store normally the online piece of a significant drug store chain that has a certifiable client confronting exterior. A couple of chains have procured online associations as a promoting strategy. This type of platforms has given a simple and convenient way to the customers through which they can request for the refill of the medicines. Not only this but the customer has the freedom to request for the delivery of the medicine at the desired location and at desired time through the associated delivery services.

Finally, self-sufficient neighbourhood drug stores have confined frameworks and used to collect the online goals to address their own situations. Some e-medical store Web goals have "computerized specialists," who assess survey patients by methods for Internet correspondence and choose if to endorse sedate drug dependent on this correspondence. The administration and administrations of online pharmacies might be directed completely in one state, may traverse a few states, or might be found seaward.

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Photographs:

CSE- Android Application for Medicine Availability and Location Finder-2020-21

Group Members Name

Shubham Ghodeswar

Prajakta Gawali

Sonal Chaudhari

Mayuri Jawade

Mrunali Gawande

Prof. Supriya Sawwashere,
Guide

Prof. Rohan Kokate
Project Co-ordinator

Prof. Supriya Sawwashere
HOD, CSE

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HOD
Computer Science & Engineering
JDCOEM, Nagpur

Adwaijra Technologies Private Limited

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Ref No.: ATPL/2021/231

08/03/2021

CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that following student of JD College of Engineering and Management; Nagpur has successfully completed Live Project titled **"Android Application for Medicine Availability and Location Finder"** during Academic Session 2020-21. They worked for mentioned Period i.e. from 6th August 2020 to 5th March 2021.

Sr.No.	Name of Student	Branch
1	Shubham Ghodeswar	Computer Science & Engineering
2	Prajakta Gawali	Computer Science & Engineering
3	Sonal Chaudhari	Computer Science & Engineering
4	Mayuri Jawade	Computer Science & Engineering
5	Mrunali Gawande	Computer Science & Engineering

We wish them a very best in all their future endeavors.
Thanking you,

For Adwaijra Technologies Private Limited

Director

Mrs. Vaishnavi Tiwari,
Director/ Program Manager,
Adwaijra Technology Pvt. Ltd, India

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Date: 14/07/2020

Title: "Existing Fire Monitoring and Extinguishing Systems in Various Domain Verticals"

Abstract

Fire is one of the most frequently occurring and destructive disasters and it is extremely serious hazard to people life safety. It is an undesirable mishap which emits heat, smoke or flame and gets converted in the huge fire. Over the last few years, the demand of fire safety systems has taken a drastic increase due to the public awareness. The main motivation of this paper is to review the existing fire monitoring and extinguishing systems in various verticals of the working domains. Also, it gives the brief about the design of automatic sensor based fire alerts, and extinguishing system inferring the Artificial Intelligence and machine learning. The system will be able to locate the victim location and intimation to various stations to be included in the fire control the fire exposures. By implementing the proposed system in a particular area, it is possible to spot the fire within small course of time and extinguish it without risking human lives.

Summary

Fire may be a very useful gizmo in human life, it's the foremost common serious hazard that may have a awfully negative effect on humans Fire is one in every of the foremost frequently occurring and destructive disasters and it's extremely serious hazard to peoples life safety. When a hearth occurs, extinguishing a fireplace early is incredibly important. Therefore, Also, fire extinguishers are the primary line of defence and a valuable means of egress during emergency during this paper, we proposed a real-time monitoring device and warning system. The target of this paper is to acknowledge the pressure of fireside extinguisher in smart phone applications Fire extinguishers are vital equipment to stop the massive fires in emergency situations and minimizing the mishaps. This system can detect abnormal and dangerous situation and notify us. This paper establishes the necessities, conditions, design problems, solutions and future plans for the firefighting system. First, we design a system with extinguisher this technique includes structure, avoidance obstacle, software development system, fire detection. We implement some malicious program to detect only fire. In India there are numerous accidents will occur because of fire as a result, automatically detects the fireplace, and sends a tuned in to the user. During this study, we made improvements to the current system. As a result, it became possible to detect a good range of fireplace extinguishing. If an automatic system is created for fire accidents, then we will have a nearly warning system.

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This can be very effective in a very fire accident in industries and residential areas where the fireplace possibilities For this sends the situation to extinguisher department that would quickly and efficiently find the hearth and suppress it. Effective monitoring, high speed recognition, and extinguishing of fireplace are problems to be proscribed immediately. The automated android application is intended to avoid further spreading of the fireplace that might cause possible human causalities or damage to property and it will help the fireplace fighters to try to their job effectively.

Photographs
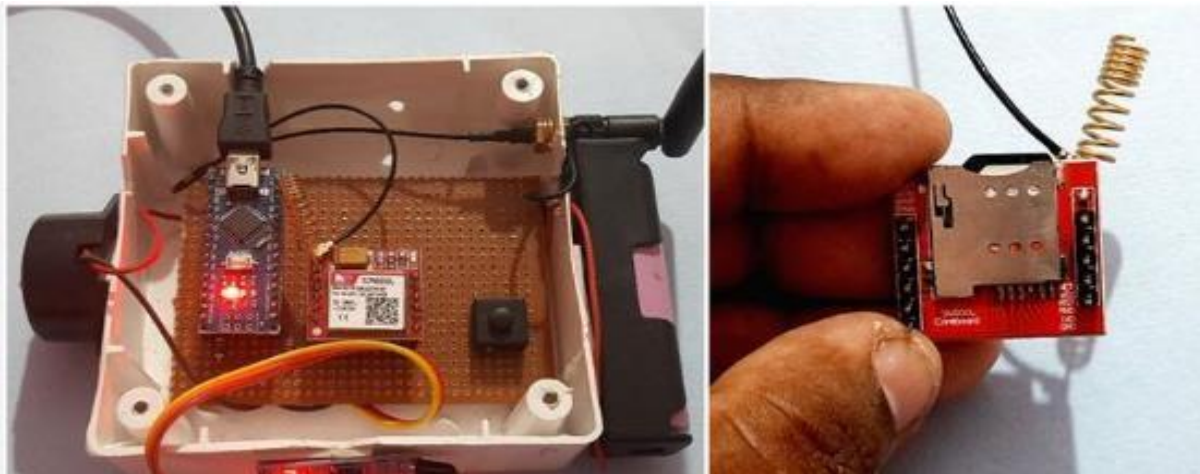
CSE- Existing Fire Monitoring and Extinguishing Systems in Various Domain Verticals -2020-21

Group Members Name

Naina Mahile

Dipali Chakole

Nikita Kotangale

Mitali Charde

Triveni Pendam

Prof. Supriya Sawwashere,	Prof. Rohan Kokate	Prof. Supriya Sawwashere
Guide	**Project Co-ordinator**	**HOD, CSE**

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HOD
Computer Science & Engineering
JDCOEM, Nagpur

PSK/2020-21/63

13/04/2021

CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that following student of J D College of Engineering and Management; Nagpur has successfully completed Live Project titled **"Existing Fire Monitoring and Extinguishing Systems In Various Domain Verticals"** during Academic Session 2020-21. They worked for mentioned Period i.e. from 11ᵗʰ August 2020 to 10ᵗʰ March 2021.

Sr.No.	Name of Student	Branch
1	Naina Mahile	Computer Science & Engineering
2	Dipali Chakole	Computer Science & Engineering
3	Nikita Kotangale	Computer Science & Engineering
4	Mitali Charde	Computer Science & Engineering
5	Triveni Pendam	Computer Science & Engineering

We wish them a very best in all their future endeavors.

Thanking you,

Mr.Prashant S.Khadau
Director, PSK Technologies Pvt.Ltd Nagpur
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Report

Title: - "Development of advanced drone for fertilizer transportation in agriculture system and security purpose".

Name of Industry:

Live Wire, Nandanwan Nagpur

Objectives:

- To get an efficient solution for payload carrying capacity using UAV (up to the weight of 5kg including vehicle).

- To build a suitable quadcopter with stable flight control.

- To directly increase the life of farmers by increasing the income per area of land.

- To design a mechanism for spraying and controlling various parameters like drone speed, spraying speed control, etc.

- To transport medical product such as blood product, vaccines and other supplies.

Working of Model:

Initially, the drone was originated as a military tool and was given different names such as Unmanned Aerial Vehicle (UAV), Miniature Pilotless Aircraft, or Flying Mini Robots. Nowadays it is being utilized in the business sector, infrastructure sector, farming, security, insurance claims, mining, entertainment, telecommunication, and transport sector, etc. Such a broad application of drones has resulted in a very fast improvement in drone technology, thereby making it more user-friendly day by day.

Nowadays, the application of small unmanned aerial vehicles (UAVs) is growing at a very fast rate in agribusiness**.**

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The drone survey allows the farmers not to keep track of their crops only but also monitor the movements of their cattle. Thermal sensor technology helps find lost animals and detect an injury or sickness. Drones can carry out this function favorably, and this adds comprehensively to the production of vegetation.

The use of Unmanned Aerial Vehicles (UAVs) commonly known as drones have great potential to revolutionize Indian agriculture and ensure country's food security.

After arming the quadcopter, the throttle was raised which made the quadcopter lift off. Then the forward motion was carried out using the receiver. The quadcopter movedleft, right, forward and backward depending on the input given to it. All the controls were working properly. The receiver was able to pick up the signal from distance over 50m the sprayer module worked when the channel associated with it was turned on. The quadcopter moved with good stability. The most satisfactory output was that it was very easy to learn to control the quadcopter. Flying it over field and spraying pesticide is easy.

For a large field, a lot of labor is required to spray the field. This would be very expensive for the farmer as he would have to hire a lot of people to spray the entire field. However, with the help of a pesticide spraying drone, a farmer himself can do the work. He wouldn't need the help of other people. So, this means that not only is the quadcopter safe for the farmer but also it will make his farming practices more efficient.

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Photographs:

Drone for fertilizer transportation in agriculture system and security purpose

ABSTRACT

The vital source of income in India is Agriculture. The production of crops depends on certain factors like pests, disease, fertilizers, etc. which can be controlled by giving proper treatment to crops. Pesticides may increase the productivity of crops but it also affects human health. So, the main aim of this paper is to design an agriculture drone for spraying pesticides and multitasking system. Pesticides affect the internal secretion and system of the body. The low levels of exposure throughout spraying might have ended up in health effects, chemical exposure will cause a large vary of medicine health effects in the body like the state of mind, reduced speed of response, reduced visual ability, altered or uncontrollable mood. An idea of

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design a multitasking drone which will help us not only in agriculture field but also in transportation work, security system and to locate the position through GPS. This paper mainly concentrates on designing a low weight aluminum structure for the drone that sprays fertilizer for farming and transportation system. The proposed system involves designing a prototype that uses simple cost-effective equipment like BLDC motor, ESC wires, etc.

H.O.D

PRINCIPAL

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This is to certify that Kapil Gaikwad, Lokesh Aarikar, Harish Behniya, Lokesh Zade, Sahil Ajmani, Manjeet Kumar, students of J D College of Engineering and Management, has successfully completed their project titled "Development of advanced drone for fertilizer transportation in agriculture system and security purpose" at our Organization with reference to the partial fulfillment of the requirement of the Bachelor course of Technology in Electrical Engineering for DBATU University.

All necessary details were provided from our side for the execution of this project.

We wish them a very best in all his future endeavors.

Thanking you!

With regards,

Mr Akshay S. Jain
Centre Head,
LIVEWIRE Nagpur
Mo: 9096060149 | www.livewireindia.com

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Report

Title: - "Image Processing based smart irrigation cum fertilizer suggester providing easy access using mobile application".

Name of Industries: Live Wire, Nandanwan Nagpur

Objectives:

Irrigation helps to grow crops, maintain landscapes, and revegetate disturbed soils in dry areas and during times of below-average rainfall. In addition to these uses, irrigation is also employed to protect crops from frost, suppress weed growth in grain fields, and prevent soil consolidation.

The primary objective of a smart irrigation system is to go beyond the basic function of water distribution. It encompasses several key goals, including water conservation, precision farming, increased crop yield, and cost-effectiveness.

The objective of this project is to offer assistance to farmers in getting Live Data (Temperature, Humidity, Soil Moisture, Soil Temperature) for efficient environment monitoring which will enable them to increase their overall yield and quality of products.

Working of Model

It has been identified that IoT systems in general produce a huge amount of data because of monitoring varied parameters in real-time and IoT irrigation systems develops big data as well. Understanding the presence of big data, it has become essential and imperative to develop mechanisms that adequately assess and manage the data. That fact that managing big data could be a difficult activity on the whole and may over-utilise nature resources, it has been suggested that there is a dire need of focusing more on sustainable management of big data. Some of the suggestions that have been understood in this regard have been identified to be using blockchain technology, discarding unnecessary data and only selecting the useful information, powering the devices through the use of solar energy, implement clustering

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Affiliated to DBATU, RTMNU & MSBTE Mumbai
Department Of Electrical Engineering
"Igniting minds to illuminate the world"
2020-21
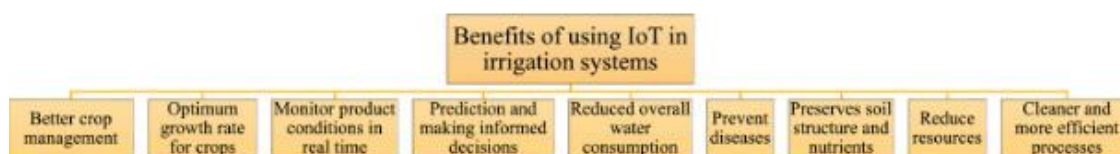
VISION	MISSION
"To develop competent and committed Electrical Engineers to serve the society"	1. To impart quality education in the field of Electrical Engineering. 2. To be excellent learning centre through research and industry interaction.

techniques to lower the overall information volume, employing efficient algorithms and utilising sustainable resources. While big data could be of immense usage in the overall irrigation process, it is highly vital to ensure effective management and control of the information.

It has further been explored that while the collected data from the sensors provide ample information that could be used, the data analysis is critical to optimise the irrigation process in accordance with the weather and crop conditions. Various organisations involved and related to the activity of irrigation are rightly able to gather the required information, but they fail to properly assess the data and deduce the useful outcomes out of it. This inability of analysis acts as a huge barrier in improving work efficiency and lowering the related risks to the activities.

There are various benefits associated with IoT systems in irrigation and some of them could be considered as overall water consumption reduction, high cost-efficiency, high performance efficiency, lesser energy consumption, lesser wastage of crops, and more

Photographs

JAIDEV EDUCATION SOCIETY'S
J D COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
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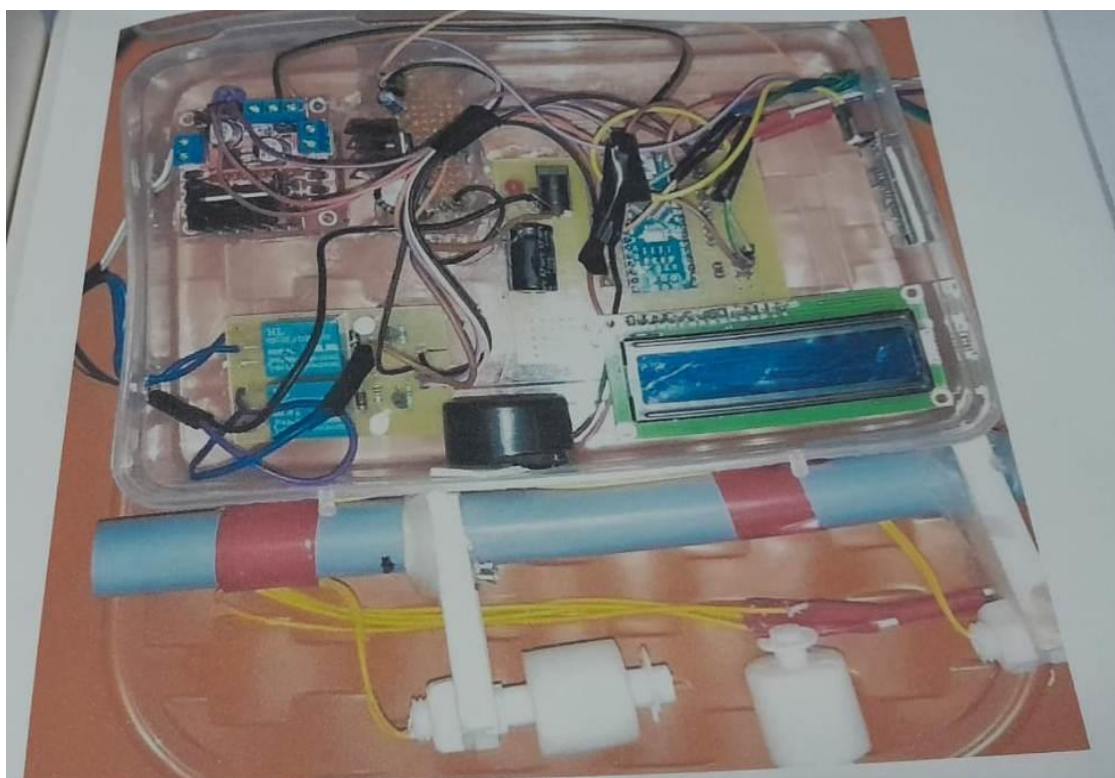| VISION	MISSION
"To develop competent and committed Electrical Engineers to serve the society"	1. To impart quality education in the field of Electrical Engineering. 2. To be excellent learning centre through research and industry interaction.

Image Processing based smart irrigation System

ABSTRACT

Countries are working into making agriculture more sustainable by integrating different technologies to enhance its operation. Implementing improvements in irrigation systems is crucial for the water-use efficiency and works as a contributor to Sustainable Development Goals (SDGs) under the United Nations specifically Goal 6 and Target 6.4. This paper aims to highlight the contribution of SMART irrigation using Internet of Things (IoT) and sensory systems in relation to the SDGs. The study is based on a qualitative design along with focusing on secondary data collection method. Automated irrigation systems are essential for conservation of water; this improvement could have a vital role in minimizing water usage. Agriculture and farming techniques is also linked with IoT and automation, to make the whole processes much more effective and efficient. Sensory systems helped farmers

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better understand their crops and reduced the environmental impacts and conserve resources. Through these advanced systems effective soil and weather monitoring takes place along with efficient water management. Irrigation systems have been determined as positive contributor toward optimized irrigation systems that could enhance the use of continuous research and development which focus on enhancing the sustainable operations and cost reduction. Lastly, the challenges and benefits for the implementation of sensory based irrigation systems are discussed. This review will assist researchers and farmers to better understand irrigation techniques and provide an adequate approach would be sufficient to carry out irrigation related activities.

H.O.D

PRINCIPAL

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

JAIDEV EDUCATION SOCIETY'S

J D COLLEGE OF ENGINEERING AND MANAGEMENT

KATOL ROAD, NAGPUR

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2020-21

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LIVEWIRE Nagpur
13, 1ˢᵗ Floor, Block 2, MB Tower, Mire layout,
Jawahar Nagar, Nandanvan Main Road, Nagpur. 440009
Contact: 7507111167/9096060149

LIVEWIRE
FOR LIVE CAREERS

Certificate of completion

TO WHOM IT MAY CONCERN

This is to certify that Arshiya Sheikh, Prajakta Patil, Rohini Pachare, Snehal Tembhurne, Shilpa Meshram, students of J D College of Engineering and Management, has successfully completed their project titled "Image Processing based smart irrigation cum fertilizer suggester providing easy access using mobile application" at our organization with reference to the partial fulfillment of the requirement of the Bachelor course of Technology in Electrical Engineering for DBATU University.

All necessary details were provided from our side for the execution of this project.

We wish them a very best in all his future endeavors.

Thanking you!

With regards,

Mr Akshay S. Jain

Centre Head,

LIVEWIRE Nagpur

Mo: 9096060149 | www.livewireindia.com

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Department of Electronics and Telecommunication Engineering
"Rectifying Ideas, Amplifying Knowledge"
2020-21

VISION	MISSION
To be a Department providing high quality & globally competent knowledge of concurrent technologies in the field of Electronics and Telecommunication."	1. To provide quality teaching learning process through well-developed educational environment and dedicated faculties. 2. To produce competent technocrats of high standards satisfying the needs of all stakeholders.

TECHNOVISION TECHNOLOGIES PVT. LTD.
6/1/B/2, Mhasala-Nagpur Bypass Road, Mhasala, Wardha,
Maharashtra-442001
Email ID: ttplwardha@gmail.com
+91 9850888320, +91 9850888325

Ref. TTPL/20-21/23   Date: 01/02/2021

PROJECT COMPLETION CERTIFICATE

This is to Certify that Ms. Anjali Dehariya, Ms. Nikita Soni, Ms. Swinal Bodele, Ms. Dhanashri Gajbhiye & Ms. Shrushti Tagde of Electronics & Telecommunication Department of JD College of Engineering and Management, Nagpur had successfully completed Live Project Title "IOT ENABLED HEALTH MONITORING SYSTEM" under the supervision of Project Engineer TECHNOVISION TECHNOLOGIES PVT. LTD. and Prof. Tushar S. Muratkar, Assistant Professor JDCOEM, Nagpur for Session 2020-21.

Mr.Swapnil Katole
Director,
Technovision Technologies Private Limited,
Wardha

Principal
J. D. College of Engineering & Management
Khandala, Katol Road,
Nagpur-441501

2020-21 ETC LIVE PROJECT CERTIICATE

REVAT NETWORK

3 Sai Nagar, Jaitala Nagpur – 440036, www.revatnetwork .com, revatnetwork@gmail.com , Ph. 77774009378

Date: 10/02/2021

PROJECT COMPLETION CERTIFICATE

This is to Certify that Ms. Kalyani Tumsare, Ms. Bhavana Shiwankar, Ms . Prachu Patil, Ms.Mritika Zalke & Ms.Shivani Singh of Electronics & Telecommunication Department of JD College of Engineering and Management, Nagpur had successfully completed Live Project Title "IOT BASED DESIGN APPROACH FOR ACCIDENT ALERT AND TRACKING SYSTEM WITH FIRST AID FACILITY" under the supervision of Project Engineer REVAT NETWORK NAGPUR and Prof. Shailesh Sakhare, Assistant Professor JDCOEM,Nagpur for Session 2020-21.

REVAT NETWORK NAGPUR

2020-21 ETC LIVE PROJECT CERTIICATE

HOD, Dept. of EN/ETC
JD College of Engineering
& Management, Nagpur

Principal
..D. College of Engineering & Management
Khandala, Katol Road

JAIDEV EDUCATION SOCIETY'S

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KATOL ROAD, NAGPUR

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Progress Beyond Excellence

2020-21 (Odd Sem)

Education to Eternity

VISION	MISSION
1.To be recognised for excellent innovative engineering, developing global leaders both in educational and research the domain of computer science and wireless engineering.	1. Create self learning environment by faciliting leadership quality, team-spirit and ethical responsibility. 2. Promote research and development with current techniques through well qualified resources in the area of computer science and wireless engineering.

Ref. No. **JDCOEM/101/IT/ LIVE PROJECT/2020-21/14**   Date: 01/05/2020

To,

MaSyCoDa Solutions, Nagpur

The Director

Nagpur

   SUBJECT: Permission to undertake Live Project.

Respected Sir/ Mam,

            It is my proud privilege to interact with you as Principal of J D College of Engineering and Management Nagpur. Our institute is presently offering Engineering courses in Information Technology, Mechanical, Civil, Electrical, Electronics and Computer Science.

            Few Student of IT Department are Keen interested to Undergo Live Project as a part of curriculum of DBATU. Which Will Provide them Industrial Knowledge and fulfillment of Final year Project in Engineering Course.
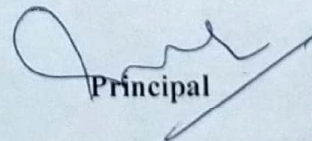
            I request you to kindly permit the students to undertake the Live Project in your esteemed organization and provide them necessary information age guidance. The Live project will greatly enhance their understanding of the subjects and give them the desired Industrial exposure.

            The name of the student is enclosed herewith.

            Thanking you.

Group No	Roll No	Name of student
01	42	Shubham Thulkar
	33	Praful Ikhankar
	32	Rahul Wadhai
	4	Mrunali Meshram
	9	Triveni Tekam
02	14	Sneha Paherwar
	16	Shristi Paherwar
	17	Sakshi Meshra
	40	Aman Patil
	48	Saurabh Anasane
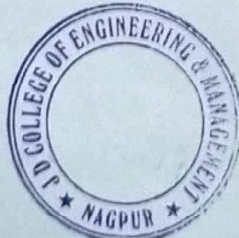
Principal

Principal

J D College of Engineering & Management

Khandala, Katol Road

Nagpur-441501

MaSyCoDa
Solutions

मॅसीकोडा सोल्युशन्स

Ref. No. MSPL/2021/001

Date: 10/05/2020

To,
HOD, Information Technology
JD College of Engineering and Management
Nagpur

SUBJECT: Acceptance to undertake Live Project.

Respected Sir,

    We are delighted to inform you that at our place we intend to take the project as a external supervisor for 02 group and involve itself in the students' academic advancement.

Principal
D.J College of Engineering & Rehabilitation
Khandala, Katol Road
Nagpur-441501

Signature &
Company Seal

JAIDEV EDUCATION SOCIETY'S
J D COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
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Education to Eternity

VISION	MISSION

"To be a center of excellence imparting professional education satisfying societal and global needs.

1.Transforming students into lifelong learners through quality teaching, training and exposure to concurrent technologies.
2.Fostering conductive atmosphere for research and development through well-equipped laboratories and qualified personnel in collaboration with global organizations.

Ref. No. **JDCOEM/1202/ LIVE PROJECT/2020-2021/341**

Date: 07/1/2021

To,
Mr. Arun Verma,
Shubhangi Castings,
Balaji Industrial Park, Nagpur-(MS)

SUBJECT: Permission to undertake Live Project.

Respected Sir/ Mam,

It is my proud privilege to interact with you as Principal of J D College of Engineering & Management, Nagpur. Our institute is presently offering Degree in Engineering in Mechanical, Civil, Electrical, Electronics and Telecommunication, Computer Science and Information Technology.

Few Student of Mechanical Engineering Department are keenly interested to undergo live project as a part of their curriculum syllabus. Which will provide them industrial knowledge and fulfillment of Degree in Engineering Course.

I request you to kindly permit the students to undertake the Live Project in your esteemed organization and provide them necessary information and guidance. The Live project will greatly enhance their understanding of the subjects and give them the desired Industrial exposure.

The name of the student is enclosed herewith.

Thank you.

Name of student

1. Mr. Gulshan M. Sahare   (Mechanical Final Year)
2. Mr. Usha M. Bharadkar   (Mechanical Final Year)
3. Mr. Rushikesh M. Bhanarkar (Mechanical Final Year)
4. Mr. Atul R. Ramteke   (Mechanical Final Year)
5. Mr. Durgesh R. Dhande   (Mechanical Final Year)
6. Mr. Nitin N. Nawkhare   (Mechanical Final Year)

Regards,

Dr. S. R. Choudhary,
Principal, JDCOEM
Principal
College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

SHUBHANGI CASTINGS
M. K. Valma
PROPRIETOR

SHUBHANGI CASTINGS

Plot No.37, B Block, Balaji Industrial Park, Mouza
Bhovari Tahsil Kamptee, NAGPUR 440037
Ph. No. +91 8208868902, +91 7387299951
E-mail: shubhangicastings@gmail.com,
Visit: www.shubhangicastings.com
GSTIN: 27BQTPV1366G1Z6
An ISO 9001:2015 Certified Company

PERMISSIONLETTER

To,
The Principal,
J D College of Engineering & Management,
Nagpur.

Respected Sir,

With Reference to your application Ref. No. **JDCOEM/1202/ LIVE PROJECT/2020-2021/341** for **Live Project** of Final Year Mechanical Eng.students of your college for the permission to undertake Live Project at our organization. We are pleased to inform you that, we are permitting these 06 students to start their Live Project from 19th January 2021 till completion of their project work.

Our staff to be available to assist the students to make help them to get familiarize with Industry.

Please contact us if there is anything that we can do more for you
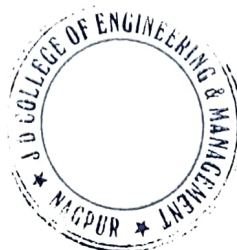
Name of student

1. Mr. Gulshan M. Sahare   (Mechanical Final Year)
2. Mr. Usha M. Bharadkar   (Mechanical Final Year)
3. Mr. Rushikesh M. Bhanarkar (Mechanical Final Year)
4. Mr. Atul R. Ramteke   (Mechanical Final Year)
5. Mr. Durgesh R. Dhande   (Mechanical Final Year)
6. Mr. Nitin N. Nawkhare   (Mechanical Final Year)

Guide Name- Prof. Aamir Sayed

Thanks & Regards,

SHUBHANGI CASTINGS

Mr. Arun Verma,
Shubhangi Castings PROPRIETOR
Balaji Industrial Park, Nagpur-(MS)

Principal
D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

TO WHOM IT MAY CONCERN

This is to certify that the students mentioned below have successfully completed their project titled "Investigation of Joining of ductile cast iron by SMAW" at our Organization with reference to the partial fulfillment of the requirement of the bachelor course in MechanicalEngineering.

Name of student

1. Mr. Gulshan M. Sahare   (Mechanical Final Year)
2. Mr. Usha M. Bharadkar   (Mechanical Final Year)
3. Mr. Rushikesh M. Bhanarkar (Mechanical Final Year)
4. Mr. Atul R. Ramteke   (Mechanical Final Year)
5. Mr. Durgesh R. Dhande   (Mechanical Final Year)
6. Mr. Nitin N. Nawkhare   (Mechanical Final Year)

Guide Name- Prof. Aamir Sayed

All necessary details were provided from our side for the execution of this project.

We wish them a very best in all his future endeavors.

Thanking you,
With regards,

SHUBHANGI CASTINGS
M.K.Varma

Mr. ArunVerma,
Shubhangi Castings,
Balaji Industrial Park, Nagpur(MS)
PROPRIETOR

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

JAIDEV EDUCATION SOCIETY'S
J D COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
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Ref. No. Jdm/1201/ Live Project/2020-21/34   **Date: 12/06/2020**

To,
The General Manager,
Informatrix IT Solution Pvt Ltd
54, Central Bazar Road, Bajaj Nagar,
Nagpur, Maharashtra 440010

SUBJECT: Permission to undertake Live Project.

Respected Sir/ Mam,

   It is my proud privilege to interact with you as Principal of J D college of Engineering and Management, Nagpur. Our institute is presently offering Degree in Management in Mechanical, Finance, Marketing, Human resources and Operations.

        Few Students of Marketing Management in Department are Keen interested to Undergo Live Project as a part of curriculum of RTMNU syllabus. Which Will Provide them Industrial Knowledge and fulfillment of Degree in Management Courses.

        I request you to kindly permit the students to undertake the Live Project in your esteemed organization and provide them necessary information age guidance. The Live project will greatly enhance their understanding of the subjects and give them the desired Industrial exposure.

Thanking you.

        The name of the student is enclosed herewith.

Sr.no	Name of the student	IInd year / Semester	Roll. No
1.	Mr.Prallek Ganvir	IInd Year 3rd Sem	24
2	Ms. Shirin Naz Musa Sheikh	IInd Year 3rd Sem	30

Principal
. .D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

15/06/2020

To,

The Principal,

J D College of Engineering and Management,

Nagpur.

Respected Sir,

With Reference to your application Dated 12/06/2020 for **Live Project** of Final Year Management Studies students of your college for the permission to undertake Live Project at our organization. We pleased to inform you that, we are permitting these 2 students to start their Live Project from 21st June 2020 till completion of their project work.

Our staff to be available to assist the students to make help them to get familiarize with Industry.

Please contact us if there is anything that we can do more for you.

Sr.no	Name of the student	IInd year / Semester	Roll. No
2.	Mr.Pralekh Ganvir	IInd year 3rd Sem	24
2	Ms. Shirin Naz Musa Sheikh	IInd year 3rd Sem	30

Thanks & Regards,

INFOR matrix

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

Certificate of Completion

TO WHOM IT MAY CONCERN

This is to certify that **Ms. Shirin Naz Musa Sheikh,** a student of J d College of Engineering and Management, has successfully completed his project titled **"A Study of Consumer Buying Behavior Towards Mobile Phones in Nagpur City"** at our organization with references to the partial fulfillment of the requirement of the Master course in Management Studies Financial Management for RTM Nagpur University.

All necessary details were provided from our side for the execution of this project.

We wish him a very best in all his future endeavors.

Thanking you,
With regards,

Principal
. O. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

Certificate of completion

TO WHOM IT MAY CONCERN

This is to certify that **Mr. Pralekh Ganvir** , a student of J d College of Engineering and Management, has successfully completed his project titled **"A Study of Marketing Strategy of Apple Smartphone in India"** at our Organization with references to the partial fulfillment of the requirement of the Master course in Management Studies Financial Management for RTM Nagpur University.

All necessary details were provided from our side for the execution of this project.

We wish him a very best in all his future endeavors.

Thanking you,
With regards,

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

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JD COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
Website: www.jdcoem.ac.in   E-mail: info@jdcoem.ac.in
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Department of Civil Engineering
"Building Better Development"
Session 2020-21

VISION	MISSION
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NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

DIKSHA TEJRAM CHANDANBATWE

for passing the course

Maintenance and Repair of Concrete Structures

with Score* 72 %

Covid-19 impacted January 2021 semester

Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2021
(12 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

THIS MODIFIED CERTIFICATE IS APPLICABLE ONLY TO STUDENTS GRADUATING IN 2021

Indian Institute of Technology Madras

swayam

*Continuous online assessment score

To validate and check scores https://nptel.ac.in/noc

CE - 2020-21

Principal
J. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

HOD, (CE)

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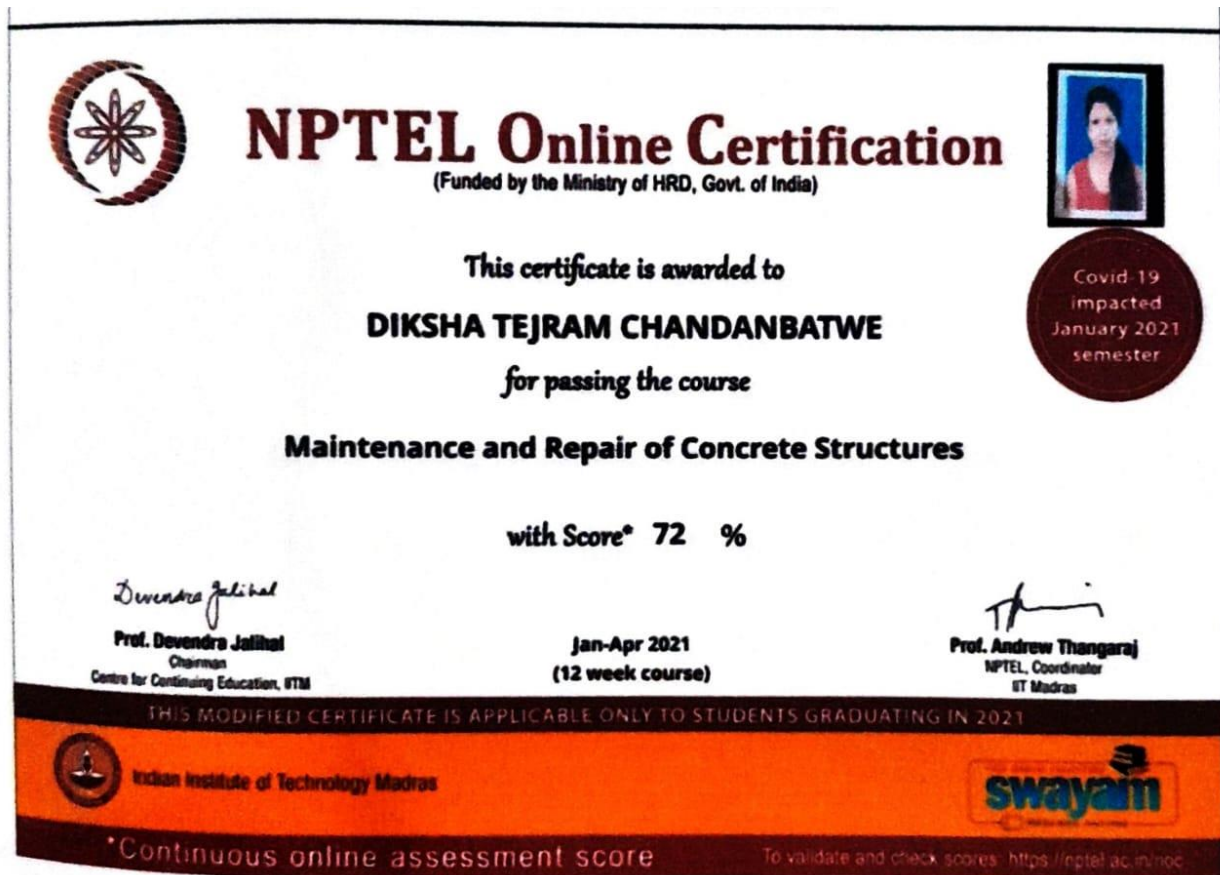**"Building Better Development"**
Session 2020-21

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Elite

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

JAYA DHAIRAM MOURYA

for successfully completing the course

Geotechnical Engineering Laboratory

with a consolidated score of **69** %

Online Assignments	22.50/25	Proctored Exam	46.5/75

Total number of candidates certified in this course: 442

Sep-Oct 2020
(4 week course)

Prof. Sridhar Iyer
Head, CDEEP & NPTEL Coordinator
IIT Bombay

Indian Institute of Technology Bombay

swayam

Roll No: NPTEL20CE48542020285

To validate and check scores: https://nptel.ac.in/noc

CE - 2020-21

HOD, (CE)

Principal
J. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

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Department of Computer Science & Engineering
"A Place to Learn, A Chance to Grow"
Session: 2020-21

VISION	MISSION
To be recognized for excellent engineering, developing global leaders both in educational and research in the domain of computer science and wireless engineering.	1. To create self-learning environment by facilitating leadership qualities, team spirit and ethical responsibilities. 2. To improve department-industry collaboration, interaction with professional society through technical knowledge and internship program. 3. To promote research and development with current techniques through well qualified resources in the area of computer science and wireless engineering.

CSE Student NPTEL Certificate 2020-21

Prof. Supriya Sawwashere
HOD. CSE
HOD
Computer Science & Engineering
JDCOEM, Nagpur

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

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Department Of Electrical Engineering
"Igniting minds to illuminate the world"
2020-21

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NPTEL Certificate 2020-21

HOD EE

Principal
Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

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HOD EE

Principal
Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

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"Rectifying Ideas, Amplifying Knowledge"
2020-21

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This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

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To
AKANSHA POTBHARE
NIMBAJI AKHADA ROAD BEHIND GOYAL TALKIES
KAMPTEE
MAHARASHTRA - 441001
PH. NO :9689320827

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to
AKANSHA POTBHARE
for successfully completing the course

Innovation, Business Models and Entrepreneurship

with a consolidated score of **73** %

Online Assignments	18.75/25	Proctored Exam	54/75

Total number of candidates certified in this course: **1938**

Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Sep-Nov 2020
(8 week course)

Prof. Inderdeep Singh
NPTEL Coordinator
IIT Roorkee

Indian Institute of Technology Roorkee

swayam
FREE ONLINE EDUCATION

Roll No: NPTEL20MG46S82020246 | To validate and check scores: https://nptel.ac.in/noc

2020-21 NPTEL Certificate

Principal
J. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

Roll No: NPTEL20CS66S72021758

To
AMAR SUDHIR BAWNE
AT. MAHADULA, WARD NO 3 DHENGARE LAYOUT,
NEAR NAGAR PANCHAYAT OFFICE
TAH. KAMPTEE DIST. NAGPUR-441111
NAGPUR
MAHARASHTRA - 441111
PH. NO :8999503721

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

AMAR SUDHIR BAWNE

for successfully completing the course

Introduction to Internet of Things

with a consolidated score of **52** %

Online Assignments	18.75/25	Proctored Exam	33/75

Total number of candidates certified in this course: **4785**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Sep-Dec 2020
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION
swayam

Roll No: NPTEL20CS66S72021758

To validate and check scores: https://nptel.ac.in/noc

2020-21 NPTEL Certificate

HOD, Dept. of EN/ETC
JD College of Engineering
& Management, Nagpur

Principal
J. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

JAIDEV EDUCATION SOCIETY'S
J D COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere
Website: www.jdcoem.ac.in   E-mail: info@jdcoem.ac.in
An Autonomous Institute, with NAAC "A" Grade
Affiliated to DBATU, RTMNU & MSBTE Mumbai
Department of Information Technology
"Progress Beyond Excellence"
Session: 2020-21

VISION	MISSION
" To Produce Competent Professionals equipped with technical knowledge and commitment for satisfying the needs of society "	1. To impart advanced knowledge with an inclination towards Research with well-equipped Labs. 2. To develop an ability to work ethically and Responsive towards the need of society.

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

DIPALI CHANDRAMANI SONTAKKE

for successfully completing the course

Developing Soft Skills and Personality

with a consolidated score of **56** %

Online Assignments	20.17/25	Proctored Exam	36/75

Total number of candidates certified in this course: **12219**

Prof. T. V. Prabhakar
Chairman
Center for Continuing Education, IITK

Aug-Oct 2018
(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

swayam

Figure 1-NPTEL_IT_2020-21

Principal
J. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

HOD IT

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certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL21ME66S14060576

To
VAIBHAV FULCHAND DHUWARE
SAKOLI
MAHARASHTRA - 441802
PH. NO :7249245847

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

VAIBHAV FULCHAND DHUWARE

for successfully completing the course

Product Design and Manufacturing

with a consolidated score of **65** %

Online Assignments	22.78/25	Proctored Exam	42/75

Total number of candidates certified in this course: **852**

Prof. Rajesh M.Hegde
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2021
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

FREE ONLINE EDUCATION
swayam
सिद्धिर्भवति भारत, उन्नत भारत

Roll No:NPTEL21ME66S14060576

To validate and check scores: https://nptel.ac.in/noc

STUDENT NPTEL CERTIFICATE 2020-21

Principal
.D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

Roll No: NPTEL21ME31S24061319

To
VAIBHAV FULCHAND DHUWARE
SAKOLI
MAHARASHTRA - 441802
PH. NO :7249245847

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

VAIBHAV FULCHAND DHUWARE

for successfully completing the course

Design Practice

with a consolidated score of **76** %

Online Assignments	20.42/25	Proctored Exam	55.5/75

Total number of candidates certified in this course: **140**

Prof. Rajesh M.Hegde
Chairman, Centre for Continuing Education
IIT Kanpur

Feb-Apr 2021
(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

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Roll No:NPTEL21ME31S24061319

To validate and check scores: https://nptel.ac.in/noc

STUDENT NPTEL CERTIFICATE 2020-21

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

Roll No: NPTEL21DE02S24061071

To
GULSHAN MUKESH SHAHARE
AMBEDKAR WARD NO. 15
AT.POST.TAH. ARJUNI/MOR
GONDIA
MAHARASHTRA - 441701
PH. NO :9307071823

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

GULSHAN MUKESH SHAHARE

for successfully completing the course

Fundamentals of Automotive Systems

with a consolidated score of **56** %

Online Assignments	24.78/25	Proctored Exam	30.75/75

Total number of candidates certified in this course: **373**

Devendra Jalihal
Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2021
(12 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

Indian Institute of Technology Madras

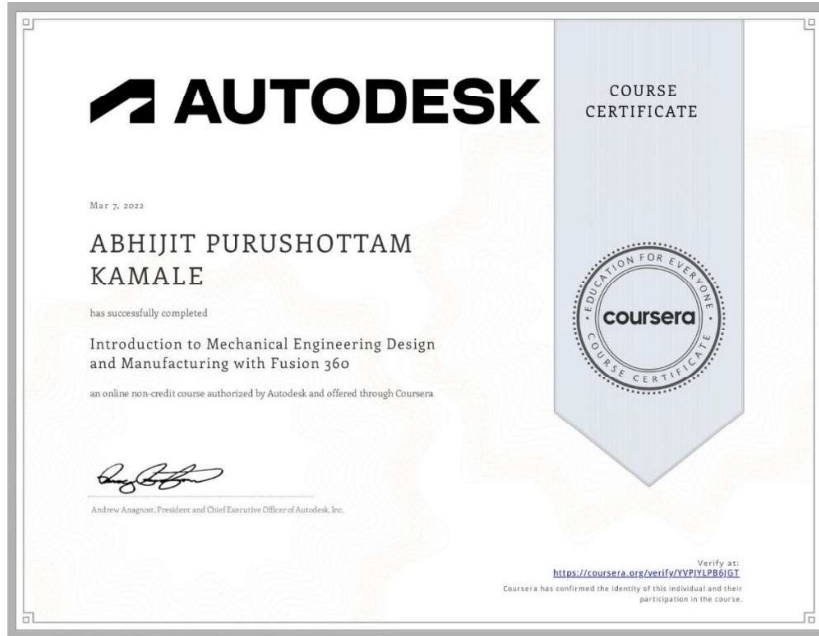FREE ONLINE EDUCATION
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Roll No: NPTEL21DE02S24061071

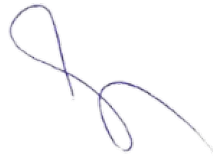To validate and check scores: https://nptel.ac.in/noc

STUDENT NPTEL CERTIFICATE 2020-21

Principal
D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

AUTODESK

COURSE CERTIFICATE

Mar 7, 2022

ABHIJIT PURUSHOTTAM KAMALE

has successfully completed

Introduction to Mechanical Engineering Design and Manufacturing with Fusion 360

an online non-credit course authorized by Autodesk and offered through Coursera

Andrew Anagnost, President and Chief Executive Officer of Autodesk, Inc.

Verify at:
https://coursera.org/verify/YVPIYLPB6IGT
Coursera has confirmed the identity of this individual and their participation in the course.

STUDENT COURSERA CERTIFICATE 2020-21

AUTODESK

COURSE CERTIFICATE

WITH HONORS

Mar 17, 2022

PRATIK PRAKASH UGALE

has successfully completed with honors

Modeling and Design for Mechanical Engineers with Autodesk Fusion 360

an online non-credit course authorized by Autodesk and offered through Coursera

Andrew Anagnost, President and Chief Executive Officer of Autodesk, Inc.

Verify at:
https://coursera.org/verify/GAFKPZRXTKYW
Coursera has confirmed the identity of this individual and their participation in the course.

STUDENT COURSERA CERTIFICATE 2020-21

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

AUTODESK

May 1, 2022

DISHANT PRAMOD RAUT

has successfully completed

**CAM and Design Manufacturing for Mechanical
Engineers with Autodesk Fusion 360**

an online non-credit course authorized by Autodesk and offered through Coursera

Andrew Anagnost, President and Chief Executive Officer of Autodesk, Inc.

coursera

Verify at:
https://coursera.org/verify/CFBQNCUKKIGD
Coursera has confirmed the identity of this individual and their
participation in the course.

STUDENT COURSERA CERTIFICATE 2020-21

Bhushan R.Mahajan
Head of Department,
DOME
JDCOEM Department
Mechanical Engineering
J D College of Engineering & Management
Nagpur

Principal
J. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

JAIDEV EDUCATION SOCIETY'S
J D COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
Website: www.jdcoem.ac.in   E-mail: info@jdcoem.ac.in
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Affiliated to DBATU, RTMNU

VISION	MISSION
To be a center of excellence imparting professional education satisfying societal and global needs.	1. Transforming students into lifelong learners through, quality teaching, training and exposure to concurrent technologies. 2. Fostering conducive atmosphere for research and development through well-equipped laboratories and qualified personnel in collaboration with global organizations.

NPTEL CERTIFICATES

MBA: 2020-21

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL20HS71S32020024

To
ADITYA DADARAO MOTGHARE
PLOT NO. 29 OM SHANTI LAYOUT, SAI NAGAR,
DABHA, WADI, NAGPUR
MAHARASHTRA - 440023
PH. NO :7008110776

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:1
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to
ADITYA DADARAO MOTGHARE
for successfully completing the course

Body Language: Key to Professional Success

with a consolidated score of **57** %

Online Assignments	19.92/25	Proctored Exam	37.5/75

Total number of candidates certified in this course: **1543**

Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Sep-Oct 2020
(4 week course)

Prof. Inderdeep Singh
NPTEL Coordinator
IIT Roorkee

Indian Institute of Technology Roorkee

swayam
FREE ONLINE EDUCATION

Roll No: NPTEL20HS71S32020024

To validate and check scores: https://nptel.ac.in/noc

1. MBA : 2020-21

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

JAIDEV EDUCATION SOCIETY'S
J D COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
Website: www.jdcoem.ac.in E-mail: info@jdcoem.ac.in
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Affiliated to DBATU, RTMNU

VISION	MISSION
To be a center of excellence imparting professional education satisfying societal and global needs.	1. Transforming students into lifelong learners through, quality teaching, training and exposure to concurrent technologies. 2. Fostering conducive atmosphere for research and development through well-equipped laboratories and qualified personnel in collaboration with global organizations.

Education to Eternity

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL20CS66S72020963

To
ADWITIYA RAJENDRA PADIGEL
PLOT NO. 2, VIDYA NAGAR, OPP. INDIAN
INSTITUTE OF FIRE ENGINEERING INSTITUTE,
NEAR FRIENDS COLONY, KATOL ROAD,
NAGPUR-440013, MAHARASHTRA
NAGPUR
MAHARASHTRA - 440013
PH. NO :8275534733

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to
ADWITIYA RAJENDRA PADIGEL
for successfully completing the course

Introduction to Internet of Things

with a consolidated score of **56** %

Online Assignments	21.50/25	Proctored Exam	34.5/75

Total number of candidates certified in this course: **4785**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Sep-Dec 2020
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION
swayam

Roll No: NPTEL20CS66S72020963 | To validate and check scores: https://nptel.ac.in/noc

2. MBA: 2020-21

Principal
J. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441503

HOD- MBA

Valorization Of Waste Plastic In Concrete Mix (VWPCM)

[1]Abdul Monish sheikh, [2]Abhay ohekar, [3]Pranay borkar, [4]Deepika kathoute, [5]Achal wadhai

[1] Assistant Professor, Department of civil Engineering, JD College Of Engineering And Management, Kalmeshawar, Nagpur —441501, Maharashtra, India.
[2345]B.tech students, Department of civil Engineering, JD College Of Engineering And Management, Kalmeshawar, Nagpur —441501, Maharashtra, India.

Abstract– when we look around us, we can see unused plastic that is accumulated through domestic and industries activities (e.g. Plastic bottles, bags and micro beads) Etc. This waste does not rot because it is non-bio degradable and therefore it remains in nature. In India public organization such as municipal corporations work to collect as well dispose of solid waste and dumped outside at open space far from city which causes air and soil pollution.

To overcome this problem we have suggested using the plastic waste in cement concrete. The ingredients generally used for preparing cement concrete are cement and inert material .the inert material that is fine and coarse aggregate can be replaced by waste plastic. Waste plastic is an inorganic in nature so it does not alter the chemical properties and also it does not affect the consistency and quality of cement concrete.

The waste plastic can be reduced to some extent from the environment as it's used in cement concretes this is a new contribution for future and field of concrete technology. The use of waste plastic in cement concrete replaced 10% to 15 % by weight of inert material will reduced the cost and may increase the quality of concrete .

Keywords: Cement Concrete, Waste Plastic, Aggregate, Cement.

I. INTRODUCTION

In India these days, 0.1 million tonnes' of solid waste is created each day which suggests that correct management of waste is one in every of the main issues we have a tendency to face these days to get rid of such waste. It's calculable that roughly 70% of plastic packaging merchandise is born-again into plastic waste during a short span. Some styles of plastic don't decompose in the slightest degree, Plastic is employed in packaging, automotive and industrial applications, medical delivery systems, Artificial implants, different care applications, water chemical change, land/soil conservation, flood hindrance, Preservation and distribution of food, housing, communication materials, security systems, and different uses. With Such giant and ranging applications, plastics contribute to associate ever increasing volume within the solid waste stream. Consistent with varied estimates, regarding 60% of plastic waste in Bharat is recycled and 40% of the waste is incinerated or drop within the soil. There's a great deal of effort globally to get rid of plastic waste. In fact, during this project we have a tendency to study the properties of plastic and emphasize however it is often employed in concrete.

Plastic could be a warp material that resists the stress and leads to failures in order that we have a tendency to be exploitation it as a filler material in concrete.

There are two main types of plastics —

I) Thermoplastics which are softened by heat and can be moulded (Injection moulded, blow moulded or vacuum formed). Good examples are acrylic, polypropylene, polystyrene, polythene and PVC.

II) Thermosets which are formed by ha heat process but are then set (like concrete) and cannot change shape by reheating. Good examples are melamine (kitchen worktops), Bakelite (black saucepan handles), polyester and epoxy resins.

We are considering concrete as an answer to plastic concrete could be a material within which if you acquire any ingredient, it'll mechanically enhance its properties the most feature that comes with it's the compressive strength that relying upon its mixing ratio. So we

Research Paper (CE) - 2020-21

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

HOD, (CE)

A Critical Review on Bamboo Reinforced Concrete Beam

Mr. Suraj Sarkar[1]
Department of Civil Engineering
JD College of engineering
Nagpur, Maharashtra, India.

Ms. Diksha Chandanbatwe [2]
Department of Civil Engineering
JD College of engineering
Nagpur, Maharashtra, India.

Mr. Krishna Jadhav [3]
Department of Civil Engineering
JD College of engineering
Nagpur, Maharashtra, India.

Mr. Vikas Rathod [4]
Department of Civil Engineering
JD College of engineering
Nagpur, Maharashtra, India.

---***---

Abstract: *In the world concrete is a man-made material. Concrete may be a common artifact within the world, reinforcement utilized in concrete is kind of costly. There's a less expensive reinforcing material which will be utilized in reinforced concrete. For temporary structure and scaffolding, bamboo used as reinforced material. In structural engineering, bamboo is used as reinforced material in concrete. Bamboo contains good water absorption property it's going to cause reduce the mechanical properties and structural failure.*

Key Words: Bamboo Reinforcement, Tensile Strength, Water Absorption, Shape of Bamboo, Durability.

1. INTRODUCTION:

Commonly concrete used as a building material, it's very important to create the event of construction, cost-effective material. Because of expensive prices and for low-cost housing and temporary structure steel is very difficult to obtain for developing countries.
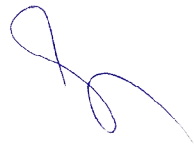
Around the world, many researchers are starting to explore the utilization of low-cost reinforced material as building construction material. Bamboo is one of the important substitutes among all possibilities. Bamboo is the fastest growing plant which we are using as a building material. It is an easily available and naturally growing plant in many parts. Transportation and harvesting cost is very less for bamboo. Manufacturing cost is very less compared to steel. Bamboo encompasses a good lastingness and light-weight weight. Bamboo features a good water absorption capacity it should reduce the mechanical properties and causes structural failure. there's have to control the water abortion of bamboo. there's have to use proper seasoning method to scale back the water absorption.

Bamboo is in a position to resist more tension than compression. the fireplace resistance is extremely good thanks to the high content of silicate acid.

Research Paper (CE) - 2020-21

HOD, (CE)

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

CSE Student Research Paper 2020-21

SURVEY ON PLANT DISEASE DETECTION AND APPLIED SMART IRRIGATION SYSTEM

1. Prof. M.M. Baig

2. Chitra Bhujade 3. Dikshita Tambe ,

4. Harshada Mohinkar 5. Pratiksha Tandekar 6 . Vanashri mohurle

Scholar (3rd year) Department of Computer Science and Engineering J D College of Engineering and Management, Nagpur, India

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vanashrimohurle12@gmail.com
mirzammb@gmail.com

Abstract **: In today's era farmers have been facing many problems related to climate change, more production of crops. some times plants can become weak by some diseases, and farmers can not be aware of their plant's growth. To check on the internet of things, the concept helps us to interconnect physical objects equipped with sensing, actuating, computing power and thus lends them the capability to collaborate on a task in unison remaining connected to the internet termed as the IoT. It is placed on the farm field and detects the disease and gives notification to farmers related to the disease on plant leaves and also suggests how to overcome that problem. Farmer also can know about climate conditions before a weak or 2 or 3 days. Wireless sensor network (WSNs) acquisition device, environment user-interfaces, and low-cost monitoring system for detecting the various disease in agriculture and farming domain use innovative of automatic learning decision support are proposed to manage the disease detection system. thus, in this paper, future the need to use technology in the agriculture field is easy to know about the climate condition before one month and the growth or health of the plant.**

Keywords **– Machine Learning, Crop monitoring, weather API, OpenCV.**

I. INTRODUCTION

THIS quick development of the web of things(IoT) technologies supposed researchers and developers to suppose new types of smart services that extract knowledge from IoT-generated data. Agriculture is that the backbone of the Indian economy. the most business of Indian people fifty nothing population depends on agriculture. In 1995 "thing to issue " was coined by entrepreneurs, in 1999, IoT (internet of things) was return up by EPC international. The EPC international Network might be a network acquainted with sharing product data between commerce partners. it absolutely was created by EPC international. the premise for the info flow inside the network is that the Electronic Product Code (EPC), EPC is additionally encoded terribly} very Frequency Identification (RFID) tag, however, is not designed fully to be used with RFID data carriers. agriculture science has been operative to evolve technologies in farming the foremost issue moving to a farm is international temperature change, nature of the soil, increment, cuss & diseases. In today's Era the foremost issue inside the agriculture field whether or not or not & climate risk. the management of weather and

Principal
. D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

climate risk in agriculture has become an important issue because of international temperature change. sheep prediction to all or any or any blocks across & districts inside the country by 2020 and helps as many as 9.5 core farmers cope with the vagaries of weather this paper could be a trial to ascertain the numerous cubic centimetre moreover as IoT techniques applied to the agriculture sector to predict soil condition, weather and various factors moving agriculture. we use the IoT is to sense the gathered data from shut moreover as perform a self-activating perform for the user. IoT in environmental looking helps to know relating to the air and water quality temperature and conditions of the soil and put together monitor the intrusion of animals into the fields. the system uses two footage information one for the work of already keep infected house and completely different for the execution of question image. the project presents disease victimization Associate in Nursing open cv camera system used within the agriculture field. the agriculture analysis of automatic disease sighton is crucial in looking large fields of crops and automatically detect the diseases. OpenCV (Open offer portable computer Vision) might be a library of programming functions within the main aimed toward amount portable computer vision. this project aims to observe diseases on plant ANd suggest an improved resolution for healthy yield and productivity of the plant .

II.   AWARENESS

To increase information and awareness among farmers to boost the assembly and productivity of assorted crops. To extend information and awareness among farmers to boost the assembly and productivity of assorted crops, the govt of Bharat has initiated varied programmers like Extension through Considering the figures for water crises around the globe, same time its increasing demands in agriculture and plenty of different industries, it ought to be provided to places solely wherever it's required, most significantly, within the needed quantities. For this purpose, enhanced awareness has been enforced to conserve the present under-stress water resources by using additional economical irrigation systems. The history of agricultural development in Bharat shows that Indian Agriculture was unable to feed the forty-five corers. currently, within the twenty-first Century, Bharat will feed its population of quite a hundred corers providing raw materials for consumer goods and industrial functions once an affordable quantity of export. so there's a Brobdingnagian increase within the production aspect in several agricultural commodities however there's no more positive of this within the level of living of farmers.

III.   OBJECTIVE

The objective of this analysis paper is to propose IoT primarily based sensible Stick which can modify farmers to own live data of soil moisture, setting the temperature at a really low value so that live observance will be done the objective of this paper is to propose a unique sensible IoT primarily based Agriculture which assisting farmers in getting Live information (Temperature, Soil Moisture) for economical setting observance which can modify them to do sensible farming and increase their overall yield and quality of merchandise .

IV.   TOOLS AND DATA COLLECTION

Tools and information assortment Following are the tools and information that we've to attain our framework is as In what follows, we will we'll we are going to place the spotlight are Incorporating the climatically Parameters The weather-based controller additionally called evaporate transpiration controller. On a routine, a lookout or remote weather service monitors conditions like temperature, wind, and wetness. The sensible irrigation controller is soil sensors based mostly business within the root zone of turf plants live the wet level within the soil and transmit this information to the controller These work with high-quality weather sensors, that receive period weather updates and use an equivalent for customizing the irrigation events. Message causing module: APIs for farming, helps to appear at what variety of diseases that plant. whereas genus Apes will trot out a wide-ranging set of information, most farming genus Apes are involved with international information, Regional information, and native information. Database: illustrative pictures of plant diseases particularly helps the professionals committed to agricultural

production, as they typically stumble upon plant health issues. The info was additionally created to become a reference for the event of ways to discover and mechanically acknowledge plant diseases. Arduino microcontroller: In Associate in Nursing automatic plant watering system or we will say it sensible irrigation system. we tend to area are unit square live mistreatment Associate in Nursing Arduino microcontroller to manage and sense the factor within the comes like sense or measure the wet within the soil we tend to are mistreatment soil wet detector. Specialized camera: should be able to see live what's happening at the farm by open cv additionally able to access a live icon of detected intrusions from anyplace employing a portable. The project presents plant disease identification mistreatment image process techniques for the machine-driven vision system utilized in the agricultural field. The projected decision-making system utilizes image content characterization and supervised classifier kind back propagation with a feed-forward neural network.

V.   RESEARCH METODOLOGY

To enhance the productivity of the crop thereby supporting each farmer and nation we've to use the technology that estimates the standard of crop and giving suggestions
 Some disadvantages in communication× should be overcome by advancing the technology to consume less energy and conjointly by creating the computer program easy use
   1. **Sensors:wetness Sensor**:- Soil wetness sensors live the water content within the soil. A soil wetness probe is created from multiple soil wetness sensors. One common variety of soil wetness sensing elements in business use could be a frequency domain sensing element like a capacitance sensor
   2. **Temperature and wetness Sensor**:-You will live temperature a lot of accurately than employing a semiconductor device. The sensing element electronic equipment is sealed and not subject to reaction, etc. The LM35 generates a better output voltage than thermocouples and should not need that the output voltage be amplified
   3. Water level Sensor:-Water level sensors× square measure accustomed sight the extent of drugs which will flow. it's accustomed indicate the optimize the extent of water knowledge the info the information} mining technique was applied to research the obtained data for predicting the acceptable temperature, humidity, and soil wetness of crops within the future arrange.
   4. The wetness content within the soil was appropriate for the vegetables to be born-again with excellent care reducing prices and increasing agricultural productivity. Moreover, this work is going to be helpful to farmers or those curious about agriculture driving by innovation.
   5. Software: specialized code solutions that concentrate on specific farm varieties or use case agnostic IoT platforms & Windows nongovernmental organization
   6. Connectivity: MySQL & Server
 Location: GPS, Geotagging
 Technology: Open CV, IoT, JavaScript, Ionic, MySQL.
Smart systems accustomed comprehend the health and growth of plants conjointly take the assistance of prediction as a result of farmers can comprehend before one month the weather or climate condition of when one month.

VI.   PROCESS DESCRIPTION

The camera we can place on the farm. the placed camera captures the captured image using an open cv plant. That plant can have some diseases by the movement of insects on the plant. that image can compare with an image that can already in the database.
And that notification can give to the farmer by the application that are we make .the name of the disease and how to overcome that disease means the solution can over there by the application .because of that application farmer also know about the climate condition. if after one month the whether can Sunny or rainy that app can also give the information of climate condition.

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VII.   ALGORITHM SURVEY

1) K-Mean Algorithm :

- Advantages : 1)Generalizes to clusters of different shapes and sizes, such as elliptical clusters.
       2)Choosing manually.
- Disadvantages
  1)Difficult   to   predict   K-Value.
 2)With global cluster, it didn't work well

We can not use the k-mean algorithm in our project because this algorithm is used to bifurcate the images.

2) Numpy Pip 3 Algorithm:

- Advantages **:** One of the main advantages of using Numpy arrays is that they take less memory space and provide better runtime speed when compared with similar data structures in python(lists and tuples**).**
- Disadvantages **:** NumPy itself supports "nan" but lack of cross-platform support within Python makes it difficult for the user

We can't used the num py pip 3 algorithm in our project because that algorithm are generally used to manage the in mobile but we are used the cloud computing in our project so no need to use the that algorithm.

3) FLOW CHART
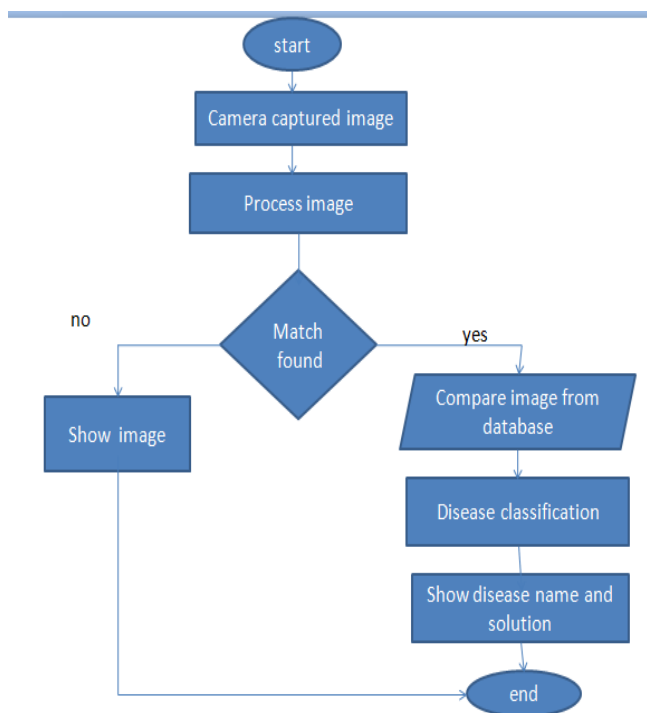
(a)

4) FUTURE SCOPE

Future work would be centered additional on increasing sensors on this method to fetch additional knowledge particularly regarding pesterer management and by conjointly group action GPS module during this system to boost this Agriculture IoT Technology to full-fledged Agriculture preciseness prepared product.

5) REFERENCES

1. Wijitdechakul, J., Kiyoki, Y., Sasaki, S.and Koopipat, C. "A Multispectral Imaging and Semantic Computing System for Agricultural Monitoring and Analysis" Information Modelling and Knowledge Bases XXVIII (2017).

2. Kiyoki, Y., Chen, X., Sasaki, S.and Koopipat, C. "A Globally-Integrated Environmert Analysis and Visualization System with Multi-Spectral & Semantic Computing in Multi-Dimensional World Map," Information Modelling and Knowledge Bases XXVIII (2017).

3. Kiyoki, Y., Chen, X., Sasaki, S.and Koopipat, C. "Multi-Dimensional Semantic Computing with Spatial-Temporal and Semantic Axes for Multi-spectrum Images in Environment Analysis," Information Modelling and Knowledge Bases XXVII (2016), pp. 27-47.

4. De Biasio, M., Arnold, T. and Leitner, R. "UAV based Multi-spectral Imaging System for Environmental Monitoring," Proceedings of The International Society for Optical Engineering (2011), pp. 503-507

5. Rouse, J. W., Hass, R. H., Schell, J. A. and Deering, D. W. "Monitoring vegetation systems in the Great Plains with ERTS," Third ERTS Symposium, NASA SP-351 I(1973), pp.309-317.

6. McFeeters, S. K. "The use of Normalized Difference Water Index (NDWI) in the delineation of open water features," International Journal of Remote Sensing (1996), pp.1425–1432.

7. Huete, A.R. "A soil-adjusted vegetation index (SAVI)" Remote Sensing of Environment(1998), vol. 25, pp. 259-309.

8. Kiyoki, Y., Kitagawa, T. and Hayama, T., "A metadatabase system for semantic image search by a mathematical model of meaning," ACM SIGMOD Record(1994), Vol.23, No. 4, pp.34-41

9. Kiyoki, Y. and Kitagawa, T., "A semantic associative search method for knowledge acquisition," Information Modelling and Knowledge Bases VI (1995), pp. 121-130. 10. Chen, X. and Kiyoki, Y., "A Visual and Semantic Image Retrieval Method Based on Similarity Computing with Query-Context Recognition," Information Modelling and Knowledge Bases XVIII (2007), pp. 245-252.

11. Lee, Brendon (2015-07-20). "Sci Dev Net; South East Asia & Pacific". SciDev.net. Retrieved 21 July 2015.

12. Hou-Ping W., Ping L., Yu W., Ying-Wei H. and Cheng L. "Measurement for opto-electronic conversion functions (OECFs) of digital still-picture camera" SPIE Proceedings Vol. 7850 (2010)

13. A. ARDESHIR GOSHTASBY., "2-D and 3-D Image Registration: for Medical, Remote Sensing, and Industrial Applications" ISBN: 978-0471-64954-0, 284 pages (Feb, 2005).

14. Edward A. Lee, "Cyber Physical Systems: Design Challenges," Object Oriented Real-Time Distributed Computing (ISORC), 11th IEEE International Symposium on 5-7 May, 2008, pp. 363-369.

15. Ragunathan (Raj) Rajkumar, Insup Lee, Lui Sha, John Stankovic, "Cyber-Physical Systems: The Next Computing Revolution", DAC '10 Proceedings of the 47th Design Automation Conference, ACM New York, NY, USA, 2010, Pages 731-736, 2010.

16. Shiori Sasaki, Yasushi Kiyoki, "Real-time Sensing, Processing and Actuating Functions of 5D World Map System: A Collaborative Knowledge Sharing System for Environmental Analysis", IOS press, SeriesFrontiers in Artificial Intelligence and Applications, Volume 280: Information Modelling and Knowledge Bases XXVII, pp. 220 - 239, DOI10.3233/978-1-61499-611-8-220, 2016.

17. Cloud Computing Assisted Blockchain-Enabled Internet of Things Chao Qiu, Student Member, IEEE, Haipeng Yao, Member, IEEE, Chunxiao Jiang, Senior Member, IEEE, Song Guo, Senior Member, IEEE, and Fangmin Xu. This is a resubmitted manuscript, which is approved by the EIC.

18. S. Gartner, "Forecast: The internet of things, worldwide, 2013," 2013.

19. W. Li, T. Logenthiran, V. Phan, and W. L. Woo, "Implemented IoTbased self-learning home management system (SHMS) for singapore," IEEE Internet of Things Journal, vol. 5, no. 3, pp. 2212–2219, June 2018.

20. W. Chin, W. Li, and H. Chen, "Energy big data security threats in iot-based smart grid communications," IEEE Comm. Mag., vol. 55, no. 10, pp. 70–75, OCTOBER 2017.

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Review on Existing Fire Monitoring and Extinguishing Systems In Various Domain Verticals

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Abstract:

Fire is one of the most frequently occurring and destructive disasters and it is extremely serious hazard to people life safety. It is an undesirable mishap which emits heat, smoke or flame and gets converted in the huge fire. Over the last few years, the demand of fire safety systems has taken a drastic increase due to the public awareness. The main motivation of this paper is to review the existing fire monitoring and extinguishing systems in various verticals of the working domains. Also it gives the brief about the design of automatic sensor based fire alerts, and extinguishing system inferring the Artificial Intelligence and machine learning. The system will be able to locate the victim location and intimation to various stations to be included in the fire control the fire exposures. By implementing the proposed system in a particular area, it is possible to spot the fire within small course of time, and extinguish it without risking human lives.

Keywords: **We would like to encourage you to list your keywords in this section**

Introduction:

Fire may be a very useful gizmo in human life, it's the foremost common serious hazard that may have a awfully negative effect on humans Fire is one in every of the foremost frequently occurring and destructive disasters and it's extremely serious hazard to peoples life safety. When a hearth occurs, extinguishing a fireplace early is incredibly important. Therefore, Also, fire extinguishers are the primary line of defence and a valuable means of egress during emergency during this paper, we proposed a real-time monitoring device and warning system . The target of this paper is to acknowledge the pressure of fireside extinguisher in smart phone applications Fire extinguishers are vital equipment to stop the massive fires in emergency situations and minimizing the mishaps. This system can detect abnormal and dangerous situation and notify us. This paper establishes the necessities, conditions, design problems, solutions and future plans for the fire fighting system. First, we design a system with extinguisher this technique includes structure, avoidance obstacle, software development system, fire detection.. We implement some malicious program to detect only fire. In India there are numerous accidents will occur because of fire As a result, automatically detects the fireplace, and sends an tuned in to the user. During this study, we made improvements to the current system. As a result, it became possible to detect a good range of fireplace extinguishing. If an automatic system is created for fire accidents, then we will have an early warning system. this can be very effective in a very fire accident in industries and residential areas where the fireplace possibilities For this sends the situation to extinguisher department that would quickly and efficiently find the hearth and suppress it. Effective monitoring, high speed recognition, and

extinguishing of fireplace are problems to be proscribed immediately. the automated android application is intended to avoid further spreading of the fireplace that might cause possible human causalities or damage to property and it will help the fireplace fighters to try to their job effectively.

Literature review :

   The authors[1] developed the prototype for a fireplace extinguishing robot with a fireplace detecting mechanism that may detect, locate and extinguish fire initially sign of smoke, with a SMS Capability. They have analysed the Delay between the transfer messages from landholder about detection of fireplace and receiving of SMS of the target system. In paper [2], the authors developed a system which will be able to detect a victim place automatically with the help of image processing and the fire will be controlled using web browser. The designed system was very cheap and less space consuming. A real time fire testing platform was introduced in paper [3], for the kitchens. The system was able to detect oil pan fire, kitchen flue fire and cabinet fire tests. The fire was detected through the change and development of temperature, smoke and fire situation. It was very difficult to extinguish oil fire and use of water based devices and dry powder extinguisher was mandatory.

 The development of a multiple sensors based asphyxiate robot was proposed in [4]. The developed extinguisher robot was operated in multiple modes using the DTMF and Bluetooth remote additionally as GSM and GPS technology. Robot was designed with three styles of sensors like a flame sensor, smoke sensor, and temperature sensor whereas one or maximum two varieties of sensors was familiarized to implement such quite robot. They analysed that the robot won't stop spraying water until all three sensors respond negatively in order to get away. It could be a common nature of fireside that it can activate anytime if a flammable source is accessible within the incident spot.

The authors [5] developed the system provided at suction ducts at each partition of the train compartment along with CO2 device for fire suppression. If the temperature goes above 80ºC, then the Arduino gives the command to enable buzzer, alerting signal to GSM network, extinguisher. The system was developed with the help of 8 pairs of temperature detectors positioned at the underside of every train cabin windows and a smoke detector positioned at the doorway, which was connected to the pump which continuously sucks the compartment air and offers it to the gas sensor. Signals from the 8 sensors were constantly monitored via Arduino and so the outputs are activated if the harm is detected.

 The authors [6] have given a short overview on latest technological improvements utilized within the hearth services. The authors provided four significant fire fighting inventions as Cold extinguisher, sonic device, Drones and Thermal Imaging Camera and analyzed their characteristics within the fire fighting operations. Fire services technological advancements can decrease the danger of injuries and fatalities. In the research [7] the URL address of affected location used to share with fireside control office by GSM module through Google Map to trace the affected location and timely operation is made possible. Presented system was more efficient, robust and low cost comparatively.

An Arduino based automatic fire alarm provider with extinguishing device has been proposed for fire protection [8]. The thermal model of a house was built where smoke detector and temperature sensor assist the flame sensor, which activates above the conditioned artificial environment maintained at 27°C. The author [9] presented the implementation of dual mode firefighting robot. The proposed fire

extinguishing robot works in either automatic or manual mode. The operation of robot is monitored and controlled by Arduino UNO microcontroller. The authors [10] developed the robotic vehicle for spraying of water within the fireplace controlled by voice command. The communication between the vehicle and humans were established through the NODE MCU and ARDUINO. This Robotic vehicle was involved in saving the people and extinguishing the hearth where fire fighters don't seem to be able to enter into the hearth accidental area. The vehicle could control from anywhere by adding GPS module to the robotic vehicle. A CO_2 Extinguisher was mounted to make the robotic vehicle that becomes a sturdy extinguisher. In paper [11], study of the discharge characteristics of the extinguishing agent from device with different configurations of nozzles in a very limited space has been presented,in which a fire extinguishing experiment platform was established. for various convergent nozzles, the larger the taper angle, the upper the diffusion concentration, and thus the higher the discharge effect.

The authors [12] introduced an ultra-fine water mist extinguisher, and studied on total flooding extinguishing test of ultra-fine water mist extinguishing combustion of paper in confined space with the dimensions of 2.4m×2.4m×3.5m. Using the ultra-fine water mist extinguisher in total flooding extinguishing test in confined space to position out paper burning, made up for the deficiency of the related research which only experiment in small space. The authors [13]introduced automatic Fire Extinguishing Hardware based model able to work in fireside accident during fire accident. The robot has been developed which features to manoeuvre within the direction with a regard to the fireside intensity. In the article [14], had a development of fireside extinguishing simulation. They analysedthe features of complex adaptive systems theory and simulation of fireplace extinguishing system. The authors [15] proposed anautomated vision system for rapid fire onset detection. to stop the born of a mishap, a system constituted by two firewire cameras and a laptop, that manages images from the cameras and remotely controls a fireplace extinguisher, was designed and realized. This technique was helpful for on-line monitoring of possible starting fire in closed environment without the necessity of retrofitting an area to put in a commonly used system.

Safetyat transformers and electrical substations of the economic facilities, was an important aspect of minimizing the plant shutdown periods in addition as workers safety [16]. In this event of fireside at a substation or transformer there could be casualties' even worse, fatalities. The legislation burning detection and extinguishing systems for indoor and outdoor transformer, substation and switchgear rooms in Turkey was receptive interpretation. The authors [17] presented the planning methodology and implementation of a coffee cost autonomous robot prototype which detect presence of fireside from its surroundings and take necessary measure to extinguish it. The employed system autonomously detects fire, moves toward it and extinguishes the hearth.

As a summary, it can be concluded that the fire is generated by heating elements and the fire extinguishing robots can help to minimize the mishaps faced because of fire. Fire extinguishers are very important equipment to prevent the large fires in emergency situations and minimizing the mishaps.

Problem Statement :

The older fire extinguishing methodologies were risky to apply and time consuming, As the mishap was to be informed to the fire extinguishing department and the further processing up to loss recoveries. As the world is growing towards the automation of many processes using IOT technologies, fire related

mishaps are also needed to be alarmed by sensing and transmitting the victim information to the destination from where necessary action will be taken by extinguishing unit.

The main aim of the proposed system is to design a low cost and simple wireless Fire protection system against fire outbreak and provide an early notification system to avoid serious damaged due to this type of hazards. Also, the system should be able to react in emergency situation in order to minimize the losses of lives and assets.

Proposed Methodology :

The proposed system can detect abnormal and dangerous situation and notify us. This paper establishes the necessities, conditions, design problems, solutions and future plans for the firefighting system. First, we design a system with extinguisher. This method includes structure, avoidance obstacle, software development system, fire detection et al. We implement some computer virus to detect only fire. We implement the system and if fire accident is true, the hearth extinguisher system can be told the fireplace source by the proposed method and move to fireplace source to fight the fireplace using extinguisher. Device affects on the lives of individuals and other domestic and loss. Smoke sensor:Automatic notification of emergency responders and safety. Monoxide is an odorless and colorless gas, which suggests you will not even bear in mind a controversy is present unless your alarm sounds. Buzzer :Easily compatible, uses lesser energy, high and effective piezo buzzer sound. A buzzer with an occasional power consumption rate is economical since it'll only require less amount of power to operate. High instantaneous sound pressure, Large voltage usage range, Small in size, good frequency response.

• **Wifi module**:Wifi doesn't require a physical cable to attach. Wifi is sweet for device that doesn't have the aptitude of a wired connection.

• **Aurdino kit**:Development of automation system and projects supported code-based control.

• **Android mobile**: Multitasking and straightforward to handle.

• **Fire sensor:**Hydrogen stations,Industrial heating, Fire detection, Fire alarm,Industrial gas, etc.
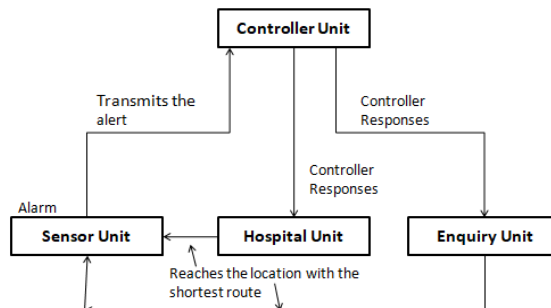
Figure 1. System Design: Alert Module

The proposed automated system will be implemented for automatic intimation of fireside accident with its location, fetched by GPS system to the fireplace extinguishing officer and that they are going to the victim place by the shortest and optimized route. The proposed system are often helpful to avoid and minimized the damages and loss of lives of individuals. The victim place are notify to station house to avoid the mishaps being happened within the nearby crowd. this technique can detect abnormal and dangerous situation and notify us this paper establishes the necessities, conditions, design problems, solutions and future plans for the firefighting system. First, we design a system with extinguisher this method includes structure, avoidance obstacle, software development system, fire detection et al. We implement some computer virus to detect only fire. We implement the system and if fire accident is true, the fireplace extinguisher system can be told the hearth source by the proposed method and move to fireplace source to fight the fireplace using extinguisher. Device affects on the lives of individuals and other domestic and loss.

References :

[1] Undug, J., Arabiran, M.P, Frades, J.R. Mazo, J. and Teogangco, M." Fire Locator, Detector and Extinguisher Robot with SMS Capability", 8th IEEE International Conference Humanoid, Nanotechnology, Information Technology, 2015,pp-1-5.

[2] HayatoTakahashi ,YuhkiKitazono, Masahiko Hanada, HiromichiHanada, KanyaMizuguchi, AKinori Fujimoto, Seiichi Serikawa. "Improvement of Automatic Fire Extinguisher System for Residential Use" ,3rd International Conference on Industrial Application Engineering,pp-1-4.

[3] XiaoyuanXu ,Pengfei Wang, NianhaoYu, Hongya Zhu . "Experimental Study on Kitchen Fire Accidents in Different Scenarios " ,Authorized licensed use limited to: Auckland University of Technology, 2020 ,pp-1-6.

[4] Humayun Rashid, Iftekhar Uddin Ahmed, AasimUllah, MD. FahimNewaz, MohammadSijanurRahaman Robin, S M Taslim Reza ."Multiple Sensors Based Fire Extinguisher Robot Based on DTMF, Bluetooth and GSM Technology with Multiple Mode of Operation" ,International Workshop on Computational Intelligence (IWCI) , 2016 , pp-1-6.

[5] P.ArunMozhi Devan, G.Manisha, K.G.T.Rajarajeswari, M.Priyanga, K.Sangeetha ."FIRE SAFETY AND ALERTING SYSTEM IN RAILWAYS" ,3rd IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT-2018), 2018, pp-1-5.

[6] I. Vajdov, B. Mikula, E. Jencova, S. Mako. "The Innovations Improving Fire Services at Airports" , Department of Air Transport Management, Faculty of Aeronautics, Technical university, 2019 , pp-1-6.

[7] Sarita Gupta, AjayMudgil ,Prashant Bhardwaj, Mahendra Gupta . "Design and Development of Automatic Fire Alert System " , 8th International Conference on Computational Intelligence and Communication Networks , 2016 ,pp-1-5.

[8] Md. Rawshan Habib, Naureen Khan, Koushik Ahmed, Mahbubur Rahman Kiran, A.K.M. Asif, Mohaiminul Islam Bhuiyan, and Omar Farrok . "Quick Fire Sensing Model and Extinguishing by Using an Arduino Based Fire Protection Device" , 5th International Conference on Advances in Electrical Engineering (ICAEE), 2019,pp-1-5.

[9] JoyalRaju, JohaanVarkey Paul, Sheik Mohammed S, Georgy Abel John, Dinanath S. Nair. " Development and Implementation of Arduino Microcontroller Based Dual Mode Fire Extinguishing

Robot" , IEEE INTERNATIONAL CONFERENCE ON INTELLIGENT TECHNIQUES IN CONTROL, OPTIMIZATION AND SIGNAL PROCESSING ,2017,pp-1-4.

[10]   R.Karthik,T.Divagar, M.Karthikeyan , D.Manoj Kumar. "Voice Operated Intelligent Fire Extinguishing Vehicle ", 5th International Conference on Advanced Computing & Communication Systems (ICACCS) , 2019,pp-1-4 .

[11]   Han Zhang, Xuhai Pan, Min Hua, YiMingJiang ,XinxinGuo, Hangchen Li. "Experimental study on release characteristics of the gas-liquid extinguishing agent in a confined space" , Authorized licensed use limited to: Cornell University Library, 2020,pp-1-5.

[12]   De-ming ZHU, Jian-yong LIU, Yuan YU, Dong LIANG . "Experimental Study on Total Flooding Extinguishing Test by New Ultra-fine Water Mist Fire Extinguisher Extinguishing Combustion of Paper",7th International Conference on Intelligent Computation Technology and Automation , 2014,pp-1-4.

[13]   B. SwethaSampath. "Automatic Fire Extinguisher Robot" , 8th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI), 2011, pp-1-4.

[14]   Chang Chunyuan, Ma Yan. "Simulation of Forest Fire Extinguishing Based on Complex Adaptive System Theory" , Second International Conference on Intelligent Computation Technology and Automation , 2009 , pp-1-4.

[15]   A. Pesatori, M. Norgia, C. Svelto. "Automated Vision System for Rapid Fire Onset Detection" I2MTC 2009 - International Instrumentation and Measurement Technology Conference ,2009 ,pp-1-4.

[16]   Ergun Sivrikaya, BülentIyigün, Murat Tekin, Mehmet FatihKivrak, ErgünCavdar, ÇağdaşDiker, OgünÖzfidan , SelahattinKucuk . "National Legislation and International Standards for Fire Detection and Protection Systems for Industrial Transformers and Substations of Industries Facilities" , 6th International Conference on Electrical and Electronics Engineering (ICEEE) , 2019 ,pp-1-7.

[17]   A.Q.M. sazzadSayyed, Md. TasnimulHasan , ShakibMahmood , Abdul Rakib Hossain . "Autonomous Fire Fighter Robot Based on Image Processing" , IEEE Region 10 Symposium (TENSYMP) , 2019 , pp-1-5.

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PHOTOVOLTAIC BOOST CONVERTER FED BLDC DRIVE

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Abstract: Due to the depleting nature of the present energy sources as well as the increased pollution Renewable energy sources are increasingly used in many applications, solar energy is the best alternative to the conventional energy sources. This paper deals with the event of an easy , profit making, useful, reliable and fuel efficient water pumping system, a DC-DC converter fed to the brushless DC motor (BLDC drive) using the BLDC controller and Arduino which is energized by a photovoltaic array. The behavior of the proposed system is evaluated through a MATLAB/Simulink based simulation study.

Index Terms - Solar Photovoltaic (SPV), MPPT, Converter, Arduino, BLDC Motor.

I. INTRODUCTION

In the Present scenario the energy demand is increasing gradually. But non renewable sources have existed only for a few years, this motivates us to use renewable energy sources. Renewable energy provides reliable power supplies and fuel variegation which increase energy security and lower risk of fuel spills while reducing the need for imported fuels. Out of the renewable energy sources, solar PV is becoming the current trend due to its large availability and it is capable to supply the present and future demand. A continuous reduction in the cost of the solar photovoltaic (SPV) panels and the power electronics devices has inspired the industries to utilize the solar PV array generated power for different applications.

As agriculture is one of the important sources for sustainable development, water pumping becoming critical. In remote areas solar powered water pumping is very useful. Water pumping has gained a broad attention as a decisive and cost effective application of the solar PV array generated power. A maximum efficiency of the solar PV array is achieved through a maximum power point tracking (MPPT) algorithm [1-2] using the DC-DC converters. Various DC-DC converters such as buck [3], boost [4], buck - boost [5], SEPIC (Single Ended Primary Inductor Converter) [2-3] have been used for MPPT in different solar PV array based applications.

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Review of PV Based Multipurpose PMSM Drive Using Arduino

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Abstract - This work propose a review of permanent magnet synchronous motor (PMSM) drive using microcontroller controlled pulses. PMSM has higher efficiency compared to the Induction Motor and Brushless DC motors. To drive PMSM the energy of 3 phase inverter is used, keeping the view the present in this project processes as (SPV) solar photovoltaic powered PMSM. The proposed topology is modelled and it's performance is manifested through simulation using MATLAB.

Index Terms - Arduino UNO, Battery, PMSM Drive, Solar Hybrid Charger, Solar photovoltaic System

I.INTRODUCTION

Solar energy has greatest availability as compare to other energy sources. Solar energy is the most clean energy and easily utilized. The solar energy which is available in our environment can be used to convert into electrical energy by Solar Photovoltaic System (SPV).It is estimated that the earth surface receive 1000 Watts power per square meter during a sunny day. In recent survey the global energy shares of Solar based renewable energy is 24%, although it varies by regions and countries.

In India 21.22% energy shares is due to the renewable SPV motor drives are the better replacement for such motors and also, they are capable of handling such mechanical loads as same as other motors

II. SOME COMMONLY USED MOTORS:

In industries wide varieties of motors are used, the most commonly used motors are as follows-

A. Induction Motor

3 Phase Induction motor is widely used in industries, in which electric current in the rotor needed to produce torque is obtained by electromagnetic induction from the magnetic field of the stator winding. The rotor of induction motor can be either cylindrical or squirrel cage type.

Three phase squirrel cage induction motors are widely used as industrial drives because they are self-starting, reliable and economical. Single phase I.M. are used extensively for smaller loads or household purpose.

Although the Induction Motor has some disadvantages, during the loading condition the power factor of the motor drops at a very low value, the speed control of the Induction motor is difficult to attain because the Induction motor is constant speed motor, it has poor starting torque hence motor cannot be used for application which require high starting torque, also

Review based on Filter Bank Multicarrier Modulation Schemes for 5G Mobile Communication

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Abstract:- Large range of potential use cases are differentiated by later wireless setup. This demands a movable allocation of the accessible time-frequency resources, which is difficult in conventional (OFDM) Hence, adjustments of OFDM, for example, windowing or separating, become vital. Alternatively, we can employ a different modulation scheme, such as Filter Bank Multi Carrier (FBMC). In this we provide a unifying framework, discussion and performance evaluation of FBMC and compare it to OFDM based schemes. Our investigations are not only based on simulations, but are substantiated by real-world testbed measurements and trials, where we show that multiple antennas and channel estimation, two of the main challenges associated with FBMC, can be efficiently dealt with. Additionally, we derive closed-form solution for the signal-to-interference ratio in doubly-selective channels and show that in many practical cases, one-tap equalizers are sufficient.

Keywords:- FMCC, OFDM, 5G.

I. INTRODUCTION

The interest of higher information rates have been expanding radically in the course of recent years. One approach to satisfy this prerequisite is to utilize signals with more extensive data transfer capacity however wideband signs are dependent upon recurrence specific blurring from the multipath channels. In such cases single transporter frameworks are not well. For wideband signs, multicarrier regulation (MCM) is the most conspicuous strategy that can conquer the blurring impact by isolating the wide band signal into a few restricted band flags that can deal with recurrence specific blurring adequately .The MCM plot utilized so far in existing frameworks, for example, Wi Fi dependent on the IEEE 802.11 norm, Wi Max (Overall Interoperability for Microwave Access) in light of the IEEE 802.16 norm, Long haul Development (LTE), LTE-progressed and so on are OFDM based and an enormous body of the writing centers around the utilization of OFDM based multicarrier frameworks for down to earth applications. The enormous fame of OFDM principally comes from various alluring highlights, for example, its heartiness to multipath blurring impacts, its high Unearthly effectiveness (SE) because of the firmly separated symmetrical subcarriers and its capacity to maintain a strategic distance from both entomb image obstruction (ISI) by utilizing adequate gatekeeper time and

intercarrier impedance (ICI) by adding a cyclic prefix (CP) in the watchman stretch. Moreover, If the length of CP is more than the greatest channel defer spread, the framework can likewise exquisitely balance a recurrence specific channel with a solitary complex coefficient for every subcarrier. Nonetheless, in spite of its few benefits, OFDM experiences powerlessness to transporter recurrence balance (CFO) bringing about ICI and the utilization of CP not just diminishes the compelling throughput of the transmission yet additionally increments send power. All the more critically, OFDM experiences huge otherworldly spillage because of the utilization of rectangular heartbeat that has helpless recurrence limitation and subsequently require huge watchman groups to ensure close by channels which likewise decreases the SE of the framework. This presents a significant cause of issue that restricts the relevance of OFDM in some present and future correspondence frameworks. The previously mentioned inadequacies limit the use of OFDM as a reasonable waveform for future remote organizations and roused analysts to search for elective arrangements and propose improved actual layers for future remote organizations.

II. FUTURE 5G MOBILE COMMUNICATION TECHNOLOGY

The energizing development of cell phones, workstations, gadgets that associated with the remote frameworks, combined with improved applications are required to go through the additional limit from higher phantom effectiveness and extra range of 4G portable correspondence framework [8]. The future fifth era (5G) versatile correspondence innovation will be carried out with 100-100Mbps client information rate, 20Gbps top information rate and the decrease of dormancy time until 1ms. It gives better inclusion and speed office to clients other than become enormous interest in future. This innovation will create a ultrahigh speed which is feasible to change the importance of phone ease of use. The huge appearances that will captivated individuals is the availability with low inertness, additional gaming alternatives and far reaching media choices with excellent sound and video.

A Smart Switch Control System Using Internet of Things

Sejal Bagde[1], Pratiksha Ambade[2], Manasvi Batho[3], Piyush Duragkar[4], Prathmesh Dahikar [5], Avinash Ikhar[6]

[1,2,3,4,5] Student, Department of Electronics and Telecommunication Engineering, J D College of Engineering and Management, Maharashtra, India

[6] Assistant Professor, Department of Electronics and Telecommunication Engineering, J D College of Engineering and Management, Maharashtra, India

ABSTRACT

As the days are passing, our world is moving towards more technological advancements and soon will become technological oriented. To come up with the upcoming modern and advanced technologies certain small yet basics steps should be taken by one self. In this paper we've presented an Android application and a unit made up of a ESP8266 Wi-Fi module, relay, logic level converter module, capacitive touch sensor module, the Android application is used to control switches using the Wi-Fi technology.

Keywords : Smart switch, IOT, Wi-Fi technology, Android application

I. INTRODUCTION

In this modern era, we all are dominated by the technology and in this, IOT plays an vital role . The augmentation of the IOT has created new evolution of everything which is connected to the internet . Due to the growth in wireless technology, there are some different of connections are introduced such as GSM, WIFI, ZIGBEE, and Bluetooth. Smart switch systems over the time tried to provide efficient, convenient, suitable and safe way for home resident to access their homes. Changing a conception of security in modern homes has an impact on the advancement of technology.

In our project SSCS using IOT, a smart switch has been created which can be operated by two techniques. Nowadays, users can access and control their homes remotely from anywhere and at any time in the world by connecting modern homes to the Internet which is very useful and popular. Cutback in power usage, price, and capacity of new electronics devices due to an increase in processing power of newly-designed processors.

Firstly we can switch ON/OFF in any device which we have connected through Wi-Fi. Secondly in the absence of Wi-Fi we can handle smart switch manually. IOT devices can be used to observe and control the mechanical, electrical and electronic systems used in various places. (eg., public and private, industrial, institutional or residential) in home and industrial automation system.

II. METHODOLOGY

Features of the system

With the commencement in the twenty first century, the swift among orthodoxy analogue conventions to the improvised effortless process for the same outcomes, in order to make life easy and effortless.

2020-21 ETC RESEARCH PAPER

Dr. Pravin Kshirsagar
HOD

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A Review of High Performance Solar Stills for Desalination of Waste Water

Abhishek S. Kagdelwar[1], Pradip S. Mandal[2], Pranjal A. Raut[3], Prachi A. Buchunde[4], Nazim M. Sheikh[5]
[1, 2, 3, 4, 5]Department of Mechanical Engineering, JD College of Engineering and Management, Nagpur
Dr. Babasaheb Ambedkar Technological University, Lonere

Abstract: Pure water is renewable resource on the earth, it getting impure now a days. Solar desalination is one of the best way to produce fresh water from any type of impure water in a sustainable way. A solar still is a simply design device used to purify the water by using solar energy by the process of evaporation and condensation. Generally, the productivity of the conventional solar still is about 1–5 L/m2/day. But this quantity is not sufficient for an individual to fulfill daily needs of water in life. Hence either more than 1 L/m2 is required per person or better for modifications to improve the solar still design for the demand of the fresh water (likely more than 5 L/m2/day). In this work, an attempt has been made to categorize the different solar still designs with productivity more than 5L/m2/day. Here, we identify as such efficient high productivity of solar stills and discuss their modifications and heat transfer mechanism to reach at useful conclusions. This review will be a reference guide for future researchers who wish to concentrate only on efficient high productivity of solar stills to improve the productivity or efficiency.

I. INTRODUCTION

Water is one of fundamental source for survival of mankind and living things on the globe. Salty water contains dissolved and undissolved substance. But it is not usable for drinkable, so there are various methods which used for the purification of water, one of them is solar still for purification but there is a lot of work need to done on it. In this article to enhance the productivity of fresh water several techniques are mentioned by different researchers. A complete review to enhanced the condensation, evaporation, both condensation and evaporation comparative experimentation of an solar still has been presented. In this present review paper, various methods of improvement works done by researchers have shown, and focused on main primary methods like use of phase change material increased in productivity was 42.2 % to 52.2% , solar parabolic dishes with two identical coned tanks which was gave the more productivity of 40 % to 60% as compared to conventional solar still, black stone as sensible material,parabolic reflector, different types of fins, photovoltaic thermal module, nanofluid of solar still have discussed with increased in productivity . All of above methods are used to increased in productivity and beneficial for improvement in distillate output of solar still. The distillate water can be used for drinking and other household purposes.

Head

DOME

Principal

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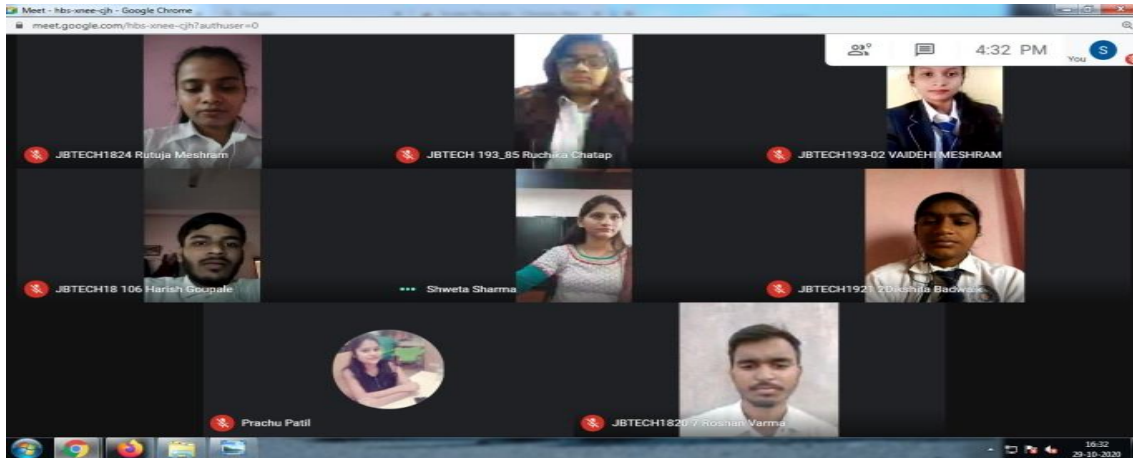
Group Discussion - Online Classes – Challenges & Solutions
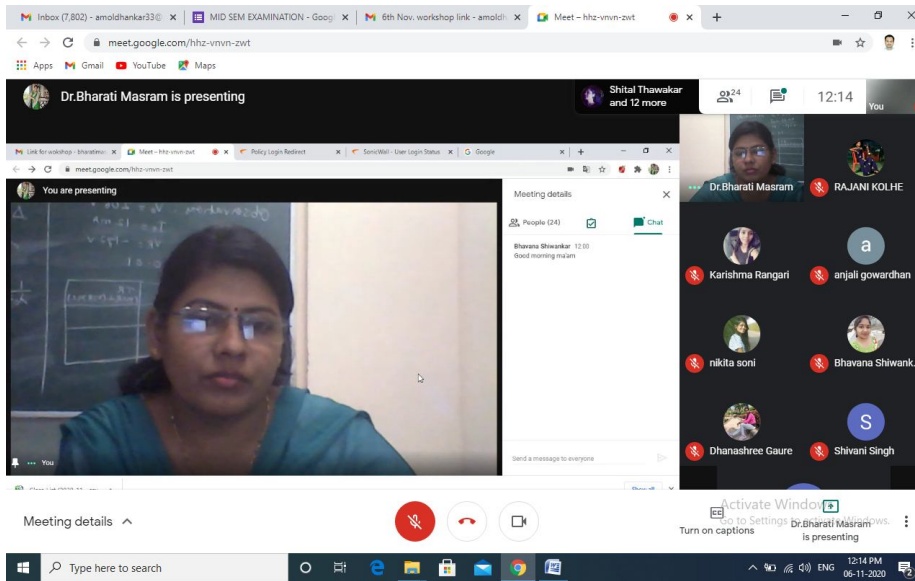
Bridge course - Utilization of LT Spice for Designing VLSI Circuits

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Alumni Interaction - Webinar on "Entrepreneurship Development Phases
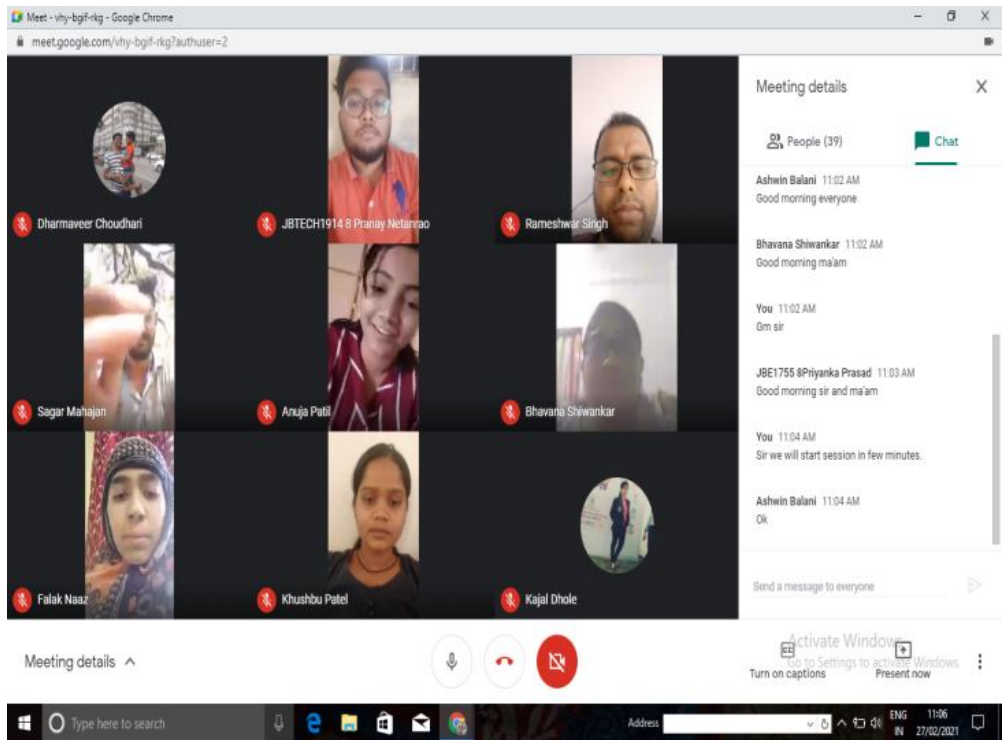
Guest lecture - Webinar on "Design Thinking, Critical Thinking and Innovation Design"
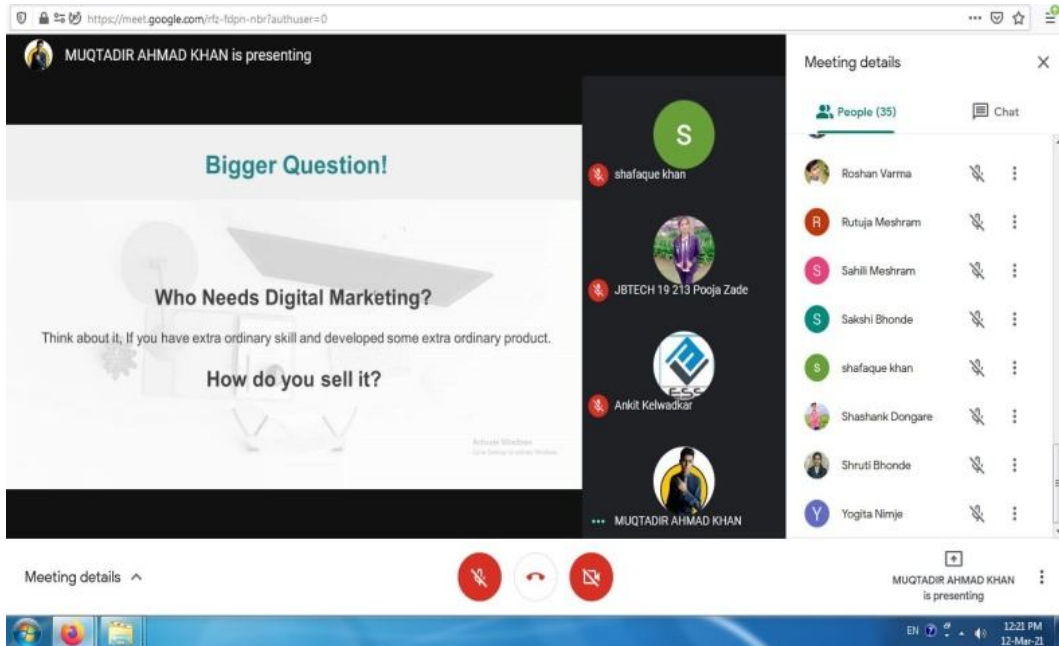
Guest lecture - Webinar on Digital Marketing Opportunities
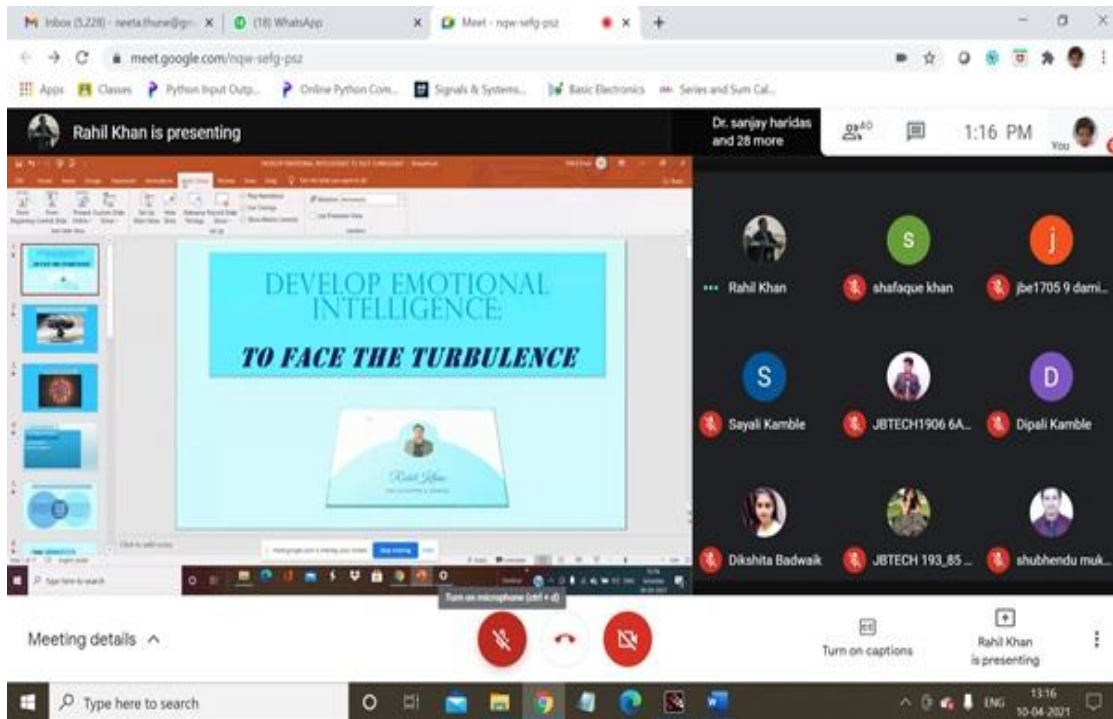
Guest lecture - Webinar on Emotional Intelligence
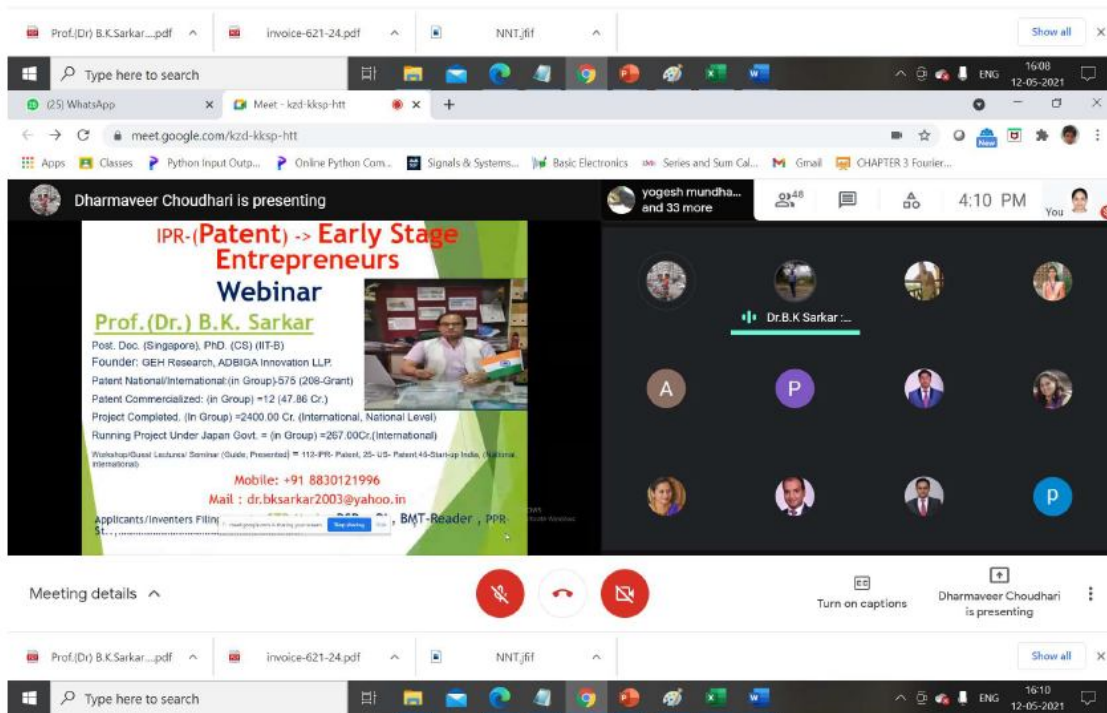
Guest lecture - Webinar on "Accelerators Incubation Opportunities for the Students &

Faculties Entrepreneurs - Early Stage Entrepreneurs"

THERMODYNAMICS Home Activity Lecture Notes Online Quizzes Lecture Recording Assignments PUT Daily Questions

J D College of Engineering & Management

THERMODYNAMICS

The basic objective of this course is to give a solid understanding of the fundamental discipline of thermodynamics, the interrelationships and applications of thermodynamics with other disciplines will be discussed as well. These disciplines are Materials and Structures; Heat transfer; and Fluid Mechanics . The intellectual threads in these disciplines, as well as their combined application to solve engineering Systems Problems will be discussed. This website is also an attempt to consolidate all the best open source resources related to thermodynamics and also act as a repository or place to host all the classwork, lecture notes, assignments, quizzes, question bank etc. kindly feel free to contact or submit any query.

Syllabus

Teaching Plan.....(Link)

Syllabus..........(Link)

Google Sites platform

Fluid course ware   Home   PPT   Lecture Notes   Assignments   Mid Sem Examination   Feedback Form

Hand Written Lecture Notes

Unit 01 Properties of Fluids ....Link(PDF)

Unit 02 Hydrostatics ....Link(PDF)

Unit 03 Fluid Kinematics ....Link (PDF)

Unit 04 Fluid Dynamics ....Link (PDF)

Unit 05 Laminar flow, Turbulent Flow ....Link(PDF)

Unit 06 Dimensional Analysis ....Link (PDF)

Lecture notes in PDF Format

Unit 02 Laminar and turbulent flow

Online Quizzes

Google Sites platform

Google Sites platform

Chroma cut videos

Chroma cut videos

Gsuite platform
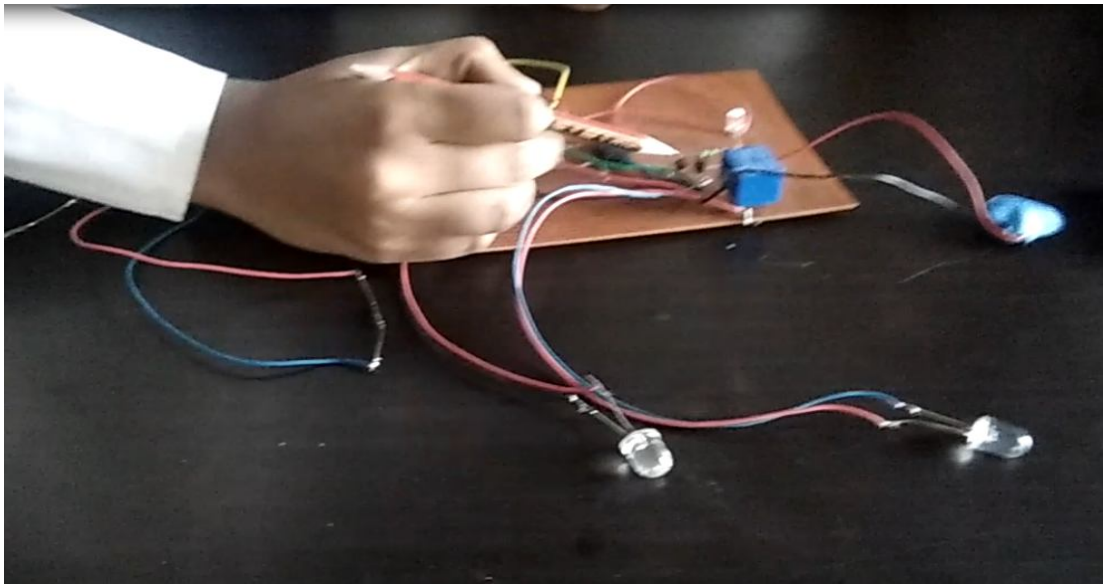
Laboratory session

Virtual lab

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Basic Science & Humanities Department
Semester-I_SESSION: 2020-21

Year/Semester: 1st Semester (First Year)
Assignment for All Branches
Engineering Mathematics
Assignment-I

Date: 10/08/2020   **Max Marks: 20**

Q.No.	Questions	CO's	Marks
Q1	Define the order and degree of differential equation. $$\frac{d^2y}{dx^2} + 3\left(\frac{dy}{dx}\right)^2 + y = 0$$	CO1/1	5
Q2	Illustrate the C.F. $(D^3 + D^2 + 4D + 4)y = 0$	CO2/2	5
Q3	Interpret the differential equation $(D^2 + 4)y = \cos 2x$	CO2/2	5
Q4	Solve the P. I. Of $(D^2 + 3D + 2)y = e^{e^x}$	CO3/3	5
Q5	Apply the variation of parameter to get the solution $$\frac{d^2y}{dx^2} + y = \sec x \tan x$$	CO4/4	

Last Date of Submission :   22/08/2020

Ms.Prerna M.Parkhi,
  Subject Teacher

Dr.A.N.Gupta,
HOD, BSHD,JDCOEM

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J D College of Engineering & Management
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Nagpur-441501

Basic Science & Humanities Department

Semester-II_SESSION: 2020-21

Year/Semester: 1st Semester (First Year)
Engineering Mathematics-II
Assignment-I
COMPLEX NUMBER

Date: 05/06/2021 **Max Marks: 20**

Q.No.	Questions	CO's/Level	Marks
Q1	Illustrate $2\cos\theta = x + \frac{1}{x}$, $2\cos\emptyset = y + \frac{1}{y}$, Prove that $x^m y^n + \frac{1}{x^m y^n} = 2\cos(m\theta + n\emptyset)$, $\frac{x^m}{y^n} + \frac{y^n}{x^m} = 2\cos(m\theta + n\emptyset)$	CO2/2	4
Q2	Identify all the values of $\left(\frac{1}{2} + i\frac{\sqrt{3}}{2}\right)^{\frac{3}{4}}$ and show that the continued product of all the values is 1.	CO3/3	4
Q3	Analyze the function $\sin(A + iB) = x + iy$, then prove that (a) $\frac{x^2}{\cosh^2 B} + \frac{y^2}{\sinh^2 B} = 1$ (b) $\frac{x^2}{\cos^2 A} - \frac{y^2}{\sin^2 A} = 1$	CO4/4	4
Q4	Using Demoivre's theorem , solve $x^7 - x^4 + x^3 - 1 = 0$	CO3/3	4
Q5	Extend the function of $\frac{\sin 7\theta}{\sin \theta}$ in power of $\sin \theta$ only.	CO4/4	4

Last Date of Submission: 12/06/2021

Ms.Prerna M.Parkhi, Dr.A.N.Gupta,
Subject Teacher HOD, BSHD,JDCOEM

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Department of Computer Science & Engineering
"A Place to Learn, A Chance to Grow"
Session: 2020-21

VISION	MISSION
To be recognized for excellent engineering, developing global leaders both in educational and research in the domain of computer science and wireless engineering.	1. To create self-learning environment by facilitating leadership qualities, team spirit and ethical responsibilities. 2. To improve department-industry collaboration, interaction with professional society through technical knowledge and internship program. 3. To promote research and development with current techniques through well qualified resources in the area of computer science and wireless engineering.

Assignment

Semester/ Branch: - IV Sem/ CSE   **Subject Code :-CS4T002**

Subject Name : -Java Programming   **Date of Display: 20/07/2020**

Subject In-charge : Prof. Rohan Kokate   **Date of Submission: 16/08/2020**

==

List of Assignment Question's:-

Que. No.	Questions	Unit No.	Topic Code	CO Mapping
1	Define JAVA.	1	T1.1	CO1
2	What is Object Oriented Programming?	1	T1.7	CO1
3	Explain JDK, JRE and JVM?	2	T2.6	CO2
4	Why Java is platform independent?	2	T2.5/T2.3	CO2
5	Explain the concept of a Class & Objects in java programming?	3	T3.6/ T3.7	CO3
6	What is meant by the Local variable and the Instance variable?	3	T3.4/T3.5	CO3
7	State the featured of JAVA Programming?	4	T4.2	CO4
8	What is meant by Overloading?	4	T4.1	CO4
9	What is the limitation of Generic Servlet and How it Overcome?	5	T5.6	CO5
10	Explain Filter Chain and Filter Config	5	T5.2	CO5

Prof. Rohan Kokate
Subject Incharge

Prof. Milind Tote
Academic Incharge

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Khandala, Katol Road
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Prof. Supriya Sawwashere
HOD, CSE

HOD
Computer Science & Engineering
JDCOEM, Nagpur

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Department Of Electrical Engineering
"Igniting minds to illuminate the world"
2020-21 (Odd Sem)

VISION	MISSION
"To develop competent and committed Electrical Engineers to serve the society"	1. To impart quality education in the field of Electrical Engineering. 2. To be excellent learning center through research and industry interaction.

Assignment

Subject	Electrical Drives
Subject code	BTEEC703
Semester/Year	7th / 4th
Unit No. I	**INTRODUCTION to Electrical Drives**
Date of display	16/10/2021
Date of submission	30/10/2021

Sr. No.	Question	Mapped Co
1	State the advantages of electrical drives	CO1/ CO2
2	Explain four quadrant operation of Electrical Drives ?	CO1/CO3/CO4
3	Write in short about the components of Electrical Drives ?	CO3
4	Give the derivation of Dynamics of load torque ?	CO3/CO4

Subject teacher-ED   Academic incharge   HOD EE

PRINCIPAL

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Department of Electronics / Electronics & Telecommunication
"Rectifying Ideas, Amplifying Knowledge"
2020-21 (Even Semester)

Assignment

Course: B. Tech in Electronics & Telecommunication   **Date : 21/04/2021**

Sem: VI

Subject Name: Computer Network & Cloud Computing

Subject Code: BTETC602

Date of Submission: 26/04/2019

Q.1 Compare the architecture of wired and wireless LANs. Also discuss the characteristics of wireless LANs

Q.2 Discuss in detail about IEEE 802.11 project.

Q.3 Discuss the different types of networks defined by Bluetooth with the help of its architecture and layers.

Q.4 Explain Zigbee in detail.

Q.5 Discuss in detail about virtual local area network (VLAN).

Prof. Avinash K. Ikhar   **Dr. Pravin Kshirsagar**

Course Coordinator /   **HOD (ETC)**
Academic Incharge

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Department of Mechanical Engineering

2020-21 (Even Sem)

VISION	MISSION
"To be a centre of excellence of learning and research in Mechanical Engineering.".	1. To provide high quality, innovative and research environment in Mechanical Engineering. 2. To impart soft skill and hard skill to achieve institutional vision.

Assignment 2   **Date: 11/02/2021**

Course: B. Tech. in Mechanical Engineering

Subject: Research Methodology

Subject Code: ME6T005

Year/Semester: 6th Semester (3rd Year)

Q. No.	Question	Level	CO	Marks
01.	Explain different types of MOCT and MOV with its advantages and limitation.	2	1	10
02.	Explain different types of Hypothesis. Also explain the significance of Null and Alternative hypothesis.	2	1,3	10
03.	Demonstrate Research methodology of any case study	6	3,6	10
04.	Compare various sources of information for literature review and data collection.	5	2,4	10

Submit via google classroom (Code- bp7rctw)

Prof. S. G. Chakrabarty
Subject Teacher

Prof. D. A. Agrawal
Academic In charge

Bhushan R.Mahajan
Head of Department,
DOME
JDCOEM Department
Mechanical Engineering
J D College of Engineering & Management
Nagpur

Principal
J D College of Engineering & Management
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Semester: - MBA I Semester   **Subject Code:-1T1**

Subject Name: - Organizational Behaviour   **Assignment: 2020-21**

==

All Questions are Compulsory:

Q.1. Himalaya wants to open a new departmental store in lonara, rural Nagpur, As a Consultant head suggest best organization design for Himalaya along with suitable reason.

Q.2. Dabur one the leading firm in India wants to hire store managers for their departmental stores as a HR head what component of individual behavior will be very important for hiring? Discuss

Q.3. HDFC Standard Life Insurance appointed new sales team leader for vidharbha region. As a new comer he not only look after to his team performance but also maintain the growth in the sales. Suggest what steps would he apply to motivate his employees so as to maintain the performance as well the growth of HDFC SLI.

Q.4. VIP is a newly registered trust working in a society with the objectives to educate poor children in rural Nagpur. As a member of VIP trust, what are the various stages of Group Development that you will go through while working?

Q.5. Coming together is a beginning, keeping together is progress, and working together is success". Analyze the above statement highlighting the importance and benefits of teamwork in a startup

Q.6.. Maruti Suzuki is planning to launch its new "SUV M500" in Indian market. A conflict has arisen between two senior members of the marketing department on the issue of media to be used for promotions. This has created a problematic situation for the subordinates to work. State and explain what all techniques can be used to resolve this conflict.

Q.7. Explain the various causes for change in organization and Demonstrate how Globalization & Workforce diversity has forced to bring the change in an Organization.

Subject In charge   **Dept. Academic Incharge**   **Dept. Head MBA**

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Semester: - MBA II Semester   **Subject Code:-2T5**

Subject Name: - International Business   **Assignment: 2020-21**

==

All Questions are Compulsory:

Q.1.A. Explain the various concept of international business. Discuss the Importance of IB.

OR

Q.1.B. Discuss regional trade blocs. Elaborate various types of trade agreement

Q.2.A. Discuss various modes of entry into International Business

OR

Q.2.B. Give a detail note on International Business Approach ethnocentric, polycentric, regiocentric & geocentric

Q.3.A. Explain various micro factor affecting in International Business Environment

OR

Q.3.B. Explain various macro factor affecting in International Business Environment

Q.4.A. Explain the role of various government institute supporting foreign trade

OR

Q.4.B. Discuss various government institute supporting foreign trade

Q.5. A. Discuss the role of EXIM policy in details

OR

Q.5.A. what are role of RBI in exchange management

Subject In charge   **Dept. Academic Incharge**   **Dept. Head MBA**

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Dept. of Management Studies (MBA)
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Education to Eternity

VISION	MISSION
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Semester: - MBA III Semester   **Subject Code:-3T4**

Subject Name: - Integrated Marketing Communication   **Assignment: 2020-21**
& Brand Management

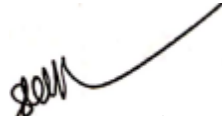===
All Questions are Compulsory:

Q.1. Explain the concept of integrated marketing communication. How it is used to generate consumer response ?

Q.2. Develop a creative message strategy for considering current market situation

Q.3. Elaborate the classification of media with suitable examples of each. How media planning is done ?

Q.4. What is brand ? Explain the concept of customer based brand equity with suitable examples.

Q.5. What are the various steps in brand building ? Discuss how brand building activities can be used to create customer value.

Subject In charge   **Dept. Academic Incharge**   **Dept. Head MBA**

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Dept. of Management Studies (MBA)
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Education to Eternity

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Semester: - MBA IV Semester　　　　　　　　　　**Subject Code:-4T5**

Subject Name: - Sales and Operations Planning　　　　**Assignment: 2020-21**

==

All Questions are Compulsory:

Q1. Discuss need for forecasting. Also write Short term, Medium term and Long term.

　　　　　　　　　Or

Q.1.B. Explain the Stages of forecasting and Sources of data

Q2.A. Discuss various Models of Forecasting

　　　　　　　　　Or

Q2.B. Explain in details Causal Methods and Econometric Model

Q3.A. Explain Aggregate Planning in details

　　　　　　　　　Or

Q3.B. Explain the Need for Aggregate Production planning

Q4.A. Discuss MPS and MRP

　　　　　　　　　Or

Q4.B. Discuss the Relation between CRP and MRP

Q5.A. Write about Distribution Planning in detail

　　　　　　　　　Or

Q5.B. Explain Inventory analysis and distribution planning, Use of ERP

Akshay Chandanthude
Subject In charge　　　　　　**Dept. Academic Incharge**　　　　　　**Dept. Head MBA**

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Khandala, Katol Road
Nagpur-441501

JAIDEV EDUCATION SOCIETY'S
JD COLLEGE OF ENGINEERING AND MANAGEMENT
KATOL ROAD, NAGPUR
Website: www.jdcoem.ac.in   E-mail: info@jdcoem.ac.in
An Autonomous Institute, with NAAC "A" Grade
Affiliated to DBATU & RTMNU
Department of Civil Engineering
"Building Better Development"
Session 2020-2021

VISION	MISSION
To be a well-known center for shaping professional leaders of Global Standards in Civil Engineering	• Provide quality education and excellent learning Environment for overall development of students. • Making Sustainable efforts for integrating academics with Industry.

|| ॐ ||

M/s. SINGH & SONS

Mob.: 9373104091

GOVT. MINING, CIVIL & TRANSPORT CONTRACTOR

NAGAR, DAHEGAON (R), CHHINDWADA ROAD, DIST. NAGPUR (M.S.)   Email: singhandsonsdahegaon@gmail.com

No. SINGH & SONS/DGN/NGP/ 0177

Date 10-09-2021

TO WHOM IT MAY CONCERN

THIS IS TO CERTIFY THAT MR. PRINCE ANIL YADAV WORKED IN OUR ORGANIZATION IN CIVIL DEPARTMENT AS A SITE SUPERVISOR . SINCE 15ᵗʰ JUNE 2020 TO 25ᵗʰ JULY 2021

DURING THE TENURE OF HIS SERVICE WE FOUND HIM TO BE SINCERE AND HARD WORKING.

HE HAS RESIGNED AND LEFT THE ORGANISATION OF HIS OWN ACCORD.

WE WISH EVERY SUCCESS IN HIS LIFE

DATE:- 10-09-2021

FOR M/S SINGH & SONS
For M/s. Singh & Sons

Partner

Scanned with CamScanner

Student Internship Completion Cerificate   (CE)- 2020-21

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

HOD, (CE)

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(An Autonomous Institute, with NAAC "A" Grade)

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Department Of Electrical Engineering

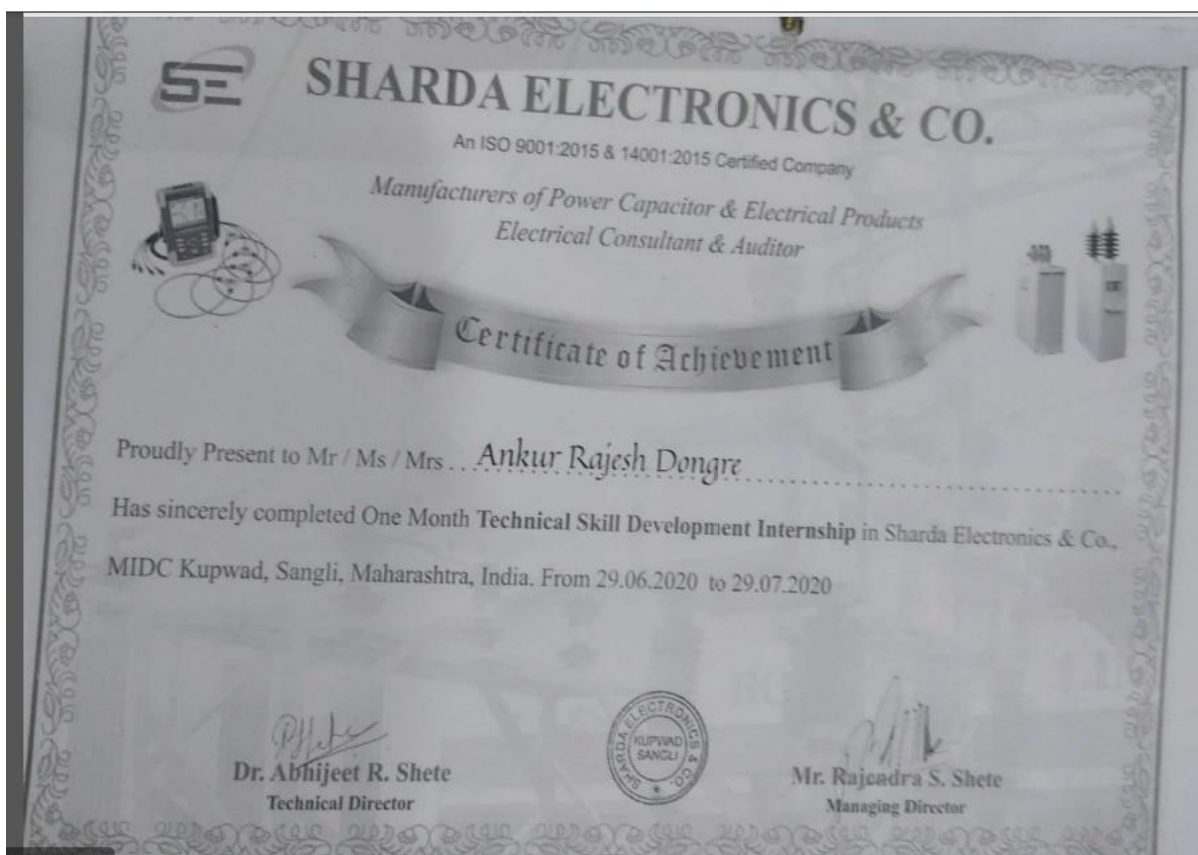*"Igniting minds to illuminate the world"*

2020-21

VISION	MISSION
"To develop competent and committed Electrical Engineers to serve the society"	1. To impart quality education in the field of Electrical Engineering. 2. To be excellent learning centre through research and industry interaction.

Internship Certificate 2020-21 EE Department

H.O.D

PRINCIPAL

Principal
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J D COLLEGE OF ENGINEERING AND MANAGEMENT

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Department Of Electrical Engineering

"Igniting minds to illuminate the world"

2020-21

VISION	MISSION
"To develop competent and committed Electrical Engineers to serve the society"	1. To impart quality education in the field of Electrical Engineering. 2. To be excellent learning centre through research and industry interaction.

Internship Certificate 2020-21 EE Department

H.O.D

PRINCIPAL

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future professionals

25ETC BHAVESH
Power Programmer Virtual Experience Program

Certificate of Completion
May 21th, 2021

Over the period of May 2021, 23ETC Bhavesh has completed practical task modules in:

Create a Local Couchbase Lite DB
Integrate React Native with Couchbase DB

Principal
J.D. College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

HOD, Dept. of EN/ETC
JD College of Engineering
& Management, Nagpur

Tom Brunskill
CEO, Co-Founder of
Forage

MasterSoft
ERP Solutions Pvt. Ltd.
Accelerating education....

9/24/2021

CERTIFICATE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. Chaitanya Ghuse** has successfully completed his internship at **MasterSoft ERP Solutions Pvt. Ltd.** The internship program commenced dated **3/4/2021** and ended on **8/31/2021.**

During this period he worked on **"Implementation and support"** in CCMS Support Department.

He has good knowledge of the project and has successfully completed the same within the assigned date.

We wish him success in all his future endeavors.

Thanking You,

For MasterSoft ERP Solutions Pvt.Ltd, Nagpur

Yasmeen Shajapurwala

Manager – HR

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

Most Trusted ERP Partner for Educational Campuses

1456-A, New Nandanvan, Nagpur-9 (MS) India. **PH. :**0712-2713705/06/07 **MOB.:** +91888 888 3394 / 860 561 6111 sales@iitms.co.in **Web:** iitms.co.in

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Robocoupler Pvt. Ltd.

Robocoupler Pvt. Ltd.
Visakhapatnam Division:
MVP Colony, Sector – 04, Back Side Indian Oil Petrol
Bunk, Isakhathota – 530017, Ph.: +91 8142678901
www.robocoupler.com , robocoupler@gmail.com

****

CIN NO: U72900AP2019PTC112448

EXPERIENCE CERTIFICATE

TO WHOM IT MAY CONCERN

Dated: 8th Sept 2021

This is to certify that **Mr./Ms./** Himanshu Wakodikar ……………………………………………………………

Identity number **ID:** ROBOCMSME202105 has been working in our organization as an intern from period 28th May 2021 - 8th Sept 2021

During the tenure, He/She was exposed to do various activities and services in developing **Robotics and Automation** were found to be satisfactory. We found extremely inquisitive and hardworking and very much interested to learn the functions of our core division and also willing to put best and get in to the depth of the subject to understand it better. Also having good design skills with a Self-motivated attitude to learn new things. The performance exceeded the expectations and was able to complete the project successfully on time.

During the tenure the responsibilities were to:

- ✓ Developing Algorithm for the projects Ideas given
- ✓ Working on PCB and Generating Gerber Files with KICAD tools
- ✓ Working on Proteous for Mechatronics Projects
- ✓ Perform periodic hardware and software system for Real Time Embedded Systems

I want to personally thank you for all of this but also for your steadfast loyalty and commitment, to our company's success and the association with us was very fruitful and we wish all the best in their endeavors.

Yours Faithfully
PRAVEEN MALLA – C.E.O.
Robocoupler Pvt. Ltd.

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

Internship offer letter

22-04-2021
SURAJ NAGINA

Email ID- surajnagina1@gmail.com
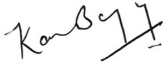Contact Number - +91 8600550213

Dear SURAJ,

I am delighted & excited to welcome you to Whitehat Education Technology Private Limited (WhiteHat Jr.) as an Intern - Pre Sales in the Slot Booking department. At WhiteHat Jr. we believe that our team is our biggest strength and we take pride in hiring ONLY the best and the brightest. We are confident that you would play a significant role in the overall success of WhiteHat Jr. and wish you the most enjoyable, learning packed and truly meaningful internship experience with WhiteHat Jr.

Your internship will be governed by the terms and conditions presented in Annexure A.

We look forward to you joining us. Please do not hesitate to call us for any information you may need. Also, please sign the duplicate of this internship letter as your acceptance and forward the same to us.

Congratulations!

For **Whitehat Education Technology Pvt. Ltd.,**

Name: Karan Bajaj

Designation: Founder & CEO
Date: 22-04-2021

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

WHITEHAT EDUCATION TECHNOLOGY PRIVATE LIMITED

Registered Office Address: 02B-139,Wing-A, 2nd Floor, WeWork Chromium, Near L&T Flyover, Milind Nagar, JVLR, Mumbai- 400072, Maharashtra, India. email: info@whitehatjr.com   CIN: U74999MH2018PTC315690

Annexure A

You shall be governed by the following terms and conditions of service during your internship with WhiteHat Jr., and those may be amended from time to time.

1. You are being hired as an Intern - Pre Sales in the Slot Booking department. You would be assigned a mentor during the internship. Your project would involve learning the pre-sales process and you would also be responsible to aid the pre-sales process in the company

2. You will be provided Twelve thousand (INR 12000/-) for 26-04-2021 to 31- 07-2021 monthly as a stipend. Any period of epidemic/pandemic and force majeure will not be computed for continuity of service under applicable Labour and Employment Laws

3. Your date of joining is 26-04-2021 and the duration of the internship would be up to 26-04-2021 to 31- 07-2021 monthly and may be extended till further period as per the business requirement and upon your successful completion of internship project

4. During this tenure you are expected to devote your time and efforts solely to WhiteHat Jr. work. You are also required to let your mentor know about forthcoming events (if there are any) in advance so that the internship project can be planned accordingly

5. You would be required to be available for this project 9 hours per day, where these 9 hours would be assigned anytime between 9:00 AM to 9:00 PM. Week off will be given as per the roster that you would be assigned to by your respective mentor

6. You would be eligible for a leave of one day after every 30 days of internship completion. No additional leave is allowed during this internship period

7. You will be part of this internship project remotely/physically on an office basis business requirement during the internship. There will be catch-ups scheduled with your mentor to discuss progress and overall internship experience at regular intervals

8. All the learning that you will produce at or in relation to WhiteHat Jr. will be the intellectual property of WhiteHat Jr.. You are not allowed to store, copy, sell, share, and distribute it to a third party under any circumstances. Similarly, you are expected to refrain from talking about your learning in public domains (both online such as blogging, social networking site and offline among your friends, college, etc.) without prior discussion and approval from your mentor

9. We take data privacy and security very seriously and it will be your responsibility to maintain the confidentiality of any students, customers, clients, and companies' data and contact details that you may get access to during your internship. WhiteHat Jr. operates on the zero-tolerance principle with regard to any breach of data security guidelines. At the completion of the internship, you are expected to hand over all WhiteHat Jr. data stored on your Personal Computer to your mentor and delete the same from your machine

10. During the internship period, you shall not engage yourself directly or indirectly or in any capacity in any other organization (other than your college). In the event of a breach of this condition, this offer is liable to be terminated forthwith by the company. In addition, you shall be liable to pay liquidated damages to the Company of an extent estimated by the Company

11. At any point during your internship the company or you may terminate this association by providing a notice of 14 days without assigning any reason. However, the company may terminate this agreement forthwith under situations of in-disciplinary behaviors and/or Zero tolerance activities and/or violation of the code of ethical business conduct of WhiteHat Jr

12. You are expected to conduct yourself with the utmost professionalism in dealing with your mentor, team members, colleagues, clients and customers and treat everyone with due respect

13. WhiteHat Jr. is a start-up and we love people who like to go beyond the normal call of duty and can think out of the box. Surprise us with your passion, intelligence, creativity and hard work – and expect appreciation & rewards to follow

14. Expect constant and continuous objective feedback from your mentor and other team members. we encourage you to ask for and provide feedback at every possible opportunity. It's your right to receive and give feedback – this is the ONLY way we all can continuously push ourselves to do better

15. Have fun at what you do and do the right thing – both the principles are core of what WhiteHat Jr. stands for and we expect you to imbibe them in your day to day actions and continuously challenge us if we are falling short of expectations on either of them

WHITEHAT EDUCATION TECHNOLOGY PRIVATE LIMITED

Registered Office Address: 02B-139,Wing-A, 2nd Floor, WeWork Chromium, Near L&T Flyover, Milind Nagar, JVLR, Mumbai- 400072, Maharashtra, India. email: info@whitehatjr.com   CIN: U74999MH2018PTC315690

Scope of Work

The scope of work during this internship will be and not limited to the following:

- Call and engage with potential customers (Whitehat, Byju or any other affiliates)
- Pitch the Whitehat Jr value proposition to the user
- Book a trial class for the interested users
- Follow up or resolve any issues for the user is facing to complete the trial class

Performance Assessment and Pre-Placement Offer (PPO)

- Your learning and performance is subject to periodic review, which is at a weekly frequency or any such frequency as decided by your mentor from time to time
- PPO is subject to your successful completion of the assigned projects as per the scope of work and role availability

Miscellaneous

- You are entitled to claim monthly reimbursement of mobile calling + internet charges upto Inr. 1500/- or as per actuals of the valid bill whichever is the lowest
- Aforementioned reimbursement is subject to submission of valid bills
- You are eligible for incentives as per incentive policy that will be communicated upon joining
- You are required to submit scanned copies of Pan Card, Aadhar Card, Cancelled Cheque, College (I'd card), Address proof

This internship offer shall be subject to you agreeing upon the following terms and conditions, jointly and independently binding upon you totally.

A. At Will: Being applauded and accepted by you at your own will and has explained about the working methodology in the epidemic/pandemic and force majeure

B. Infrastructure: It is declared and accepted by you about having the requisite infrastructure to perform your duties from any location other than the workplace. Infrastructure means laptop/desktop with required configurations, updated RAM, video and audio features, a high speed internet connectivity with a minimum of 10 MBPS speed and a fully functional smart mobile phone. Failing to have the infrastructure at any point may lead to termination of the association with WhiteHatJr

C. You have agreed upon to perform as per the existing or change of any performance targets/ KRAs/KSAs during COVID 19 situation and or otherwise and failing which the said internship will come to an end without any stipend

D. Any litigation, grievances and disputes with regards to this will be treated null and void, which you declare at your wish and will.

Acceptance by the Intern:

I have negotiated, agreed, read and understood all the terms and conditions of this Internship letter as well as Annexure hereto and affix my signature in complete acceptance of the terms of the letter

Date:

Place:

SURAJ NAGINA

Bhushan R.Mahajan
Head of Department,
DOME
JD HOEM Department
Mechanical Engineering
J D College of Engineering & Management
Nagpur

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501

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Department of Computer Science & Engineering
"A Place to Learn, A Chance to Grow"
Session: 2020-21

| VISION	MISSION
To be recognized for excellent engineering, developing global leaders both in educational and research in the domain of computer science and wireless engineering.	1. To create self-learning environment by facilitating leadership qualities, team spirit and ethical responsibilities. 2. To improve department-industry collaboration, interaction with professional society through technical knowledge and internship program. 3. To promote research and development with current techniques through well qualified resources in the area of computer science and wireless engineering.

CSE Student Presentation Photo 2020-21
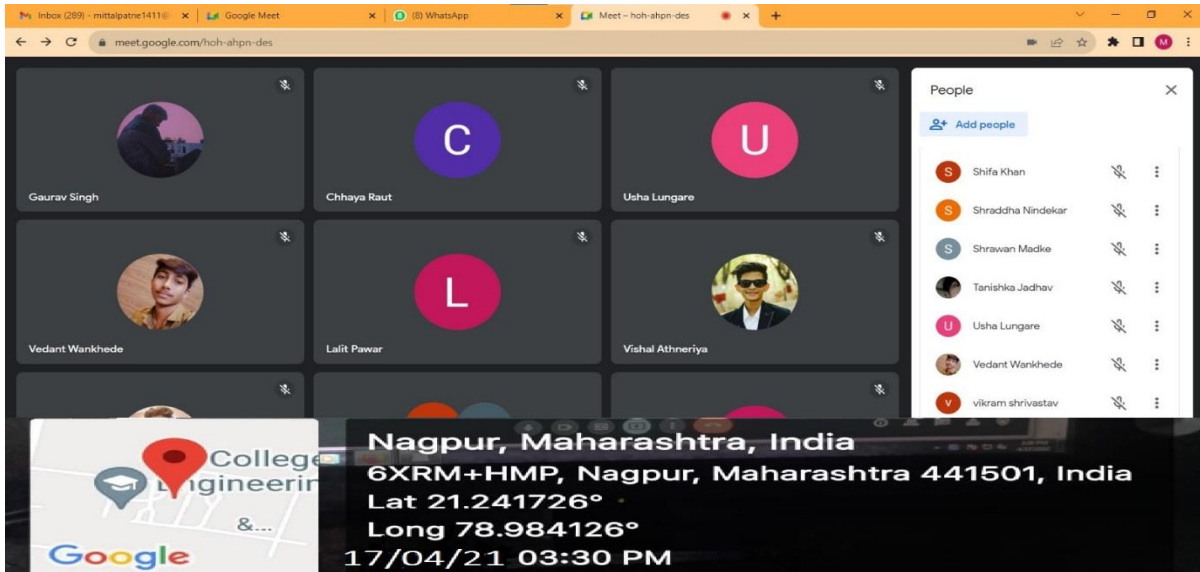
2020-21 CSE Presentation Photo
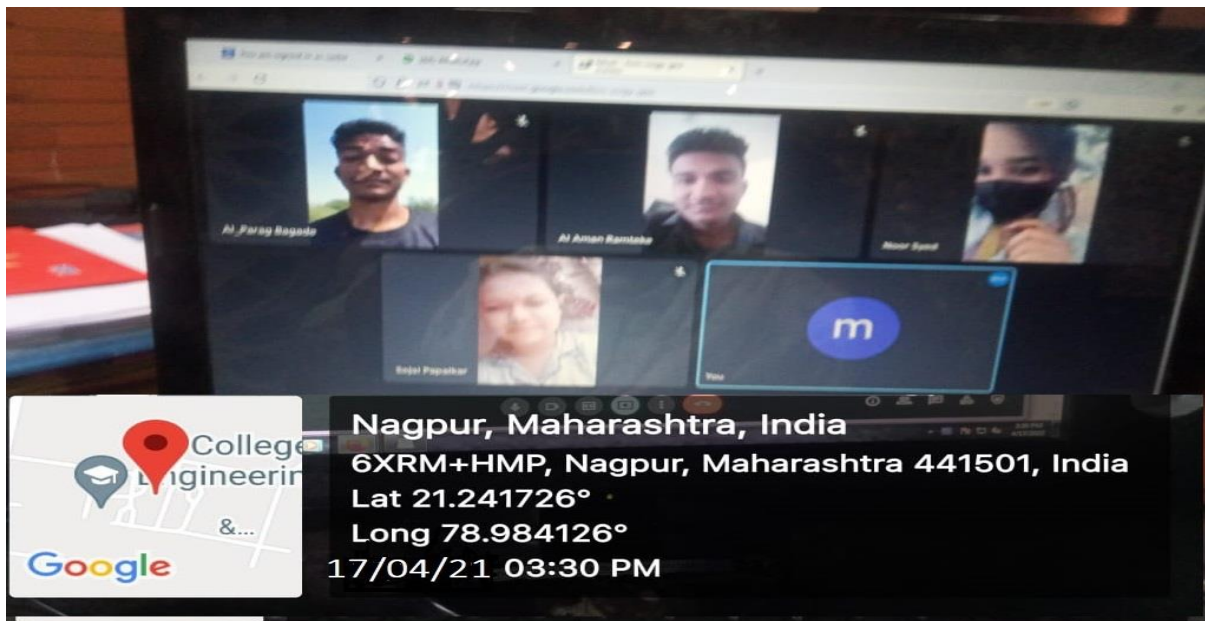
2020-21 CSE Presentation Photo

Prof. Supriya Sawwashere
HOD. CSE
HOD
Computer Science & Engineering
JDCOEM, Nagpur

Principal
J D College of Engineering & Management
Khandala, Katol Road
Nagpur-441501