



JCT COLLEGE OF ENGINEERING AND TECHNOLOGY, PICHANUR.
DEPARTMENT OF AUTOMOBILE ENGINEERING
PROJECT TITLE (2020-2021 EVEN SEMESTER)



BATCH NO	BATCH MEMBERS	REG NO	GUIDE NAME	PROJECT TITLE
1	Divya T K		Dr Thirumurugan	EXPERIMENTAL STUDY ON HYBRID CONCRETE
	Kartheeswaran B			
	Niyas mohammed			
	Shyam kumar			
2	Ajith		Dr A Kumar	EXPERIMENTAL ON FLY ASH BRICKS
	Arshad			
	Hanoch varghese			
3	Aneesh		Dr A Thangadurai	EXPERIMENTAL INVESTIGATION ON LIGHT WEIGHT CONCRETE
	Jefna jabbar			
	Nimal Krishnan			
	Gopika			
4	Bablu santhosh		Mr.S.Sadhasivam	GROUND WATER QUALITY ASSESSMENT BY GIS
	Jilsy J			
	Devaprakash			
	Kanchivanam			


PROJECT COORDINATOR




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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
COIMBATORE, PICHANUR, 641-105
ANNA UNIVERSITY, CHENNAI-600 025, MARCH-2021
2020-2021

CERTIFICATE

This is to certify that the project entitled "**An Experimental Investigation of Lightweight Concrete Added With Plastic Aggregate And Rice Husk Ash**" is bonafide work of Ms.Divya.T.K(720917103302), Mr.Kartheeswaran.B(720917103018), Mr.Niyaz Mahmood (720917103028), Mr.Shyam Kumar,K.P (720917103034) submitted to the Anna University in partial fulfillment of the requirement for the award of the degree of Bachelor of Engineering.

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Guide

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CHAPTER 6

CONCLUSION

Lightweight means "LIGHT IN WEIGHT" or weight is less than usual. Lightweight concrete can be defined as the type of concrete which includes an expanding agent in that it increases the volume of mixture while giving additional qualities such as mil ability and lessened the dead weight. The main specialty of lightweight concrete is its low density and thermal conductivity.

For reducing the weight of concrete without compromising the volume and efficient strength we have to use a lightweight material which is having sufficient strength. We discussed it with our lecturers and some engineers and decided to select a material which is non-biodegradable and easily available for cheaper rate. Hence we used plastic aggregates as a fully replacement for coarse aggregates and rice husk ash as partially replacement for fine aggregates. And for volume compromise, we use eps molecules. We successfully completed our project without compromising the parameters of lightweight concrete such as density and weight. Our primary view was to determine the compressive strength and we get a strength of 10N/mm² for 28days.

As we conclude that the usage of plastic aggregates as coarse aggregate is highly beneficial without comprising the strength parameters and also it will benefits the environment by reducing the plastic waste by reusing it in a proper way as a material in concrete.

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this Project report "EXPERIMENTAL INVESTIGATION OF FLYASH BRICKS WITH CONVENTIONAL BRICKS" is the bonafide work of AJITH V(720917162004), ARSHAD M K(720917162010), HANOCH VARGHESE (720917163003) who carried out the Project work under my supervision

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The most of the building material for construction of houses is the normal brick. The rapid growth in today's construction industry has obliged the civil engineers in searching for more efficient and durable alternatives for beyond the limitations of the conventional brick production. This project is a study about Fly ash Cement Bricks which are manufactured by composition of Fly ash, cement and sand with requisite quantity of water mixed in proper proportions. These bricks are comparatively lighter in weight and stronger than the ordinary clay bricks. The Fly ash is one of the major by-product of thermal power plants, 1kg of coal on burning produces about 200 to 300gms of Fly ash. Fly Ash produced by Incineration of Corn Cobs is also used in this experiment. Thus, Fly ash is very easily available which can be used to manufacture Fly ash bricks as a substitute of ordinary clay bricks which could lead to reduce the environmental pollution and help in conserving natural resources. This paper presents the experimental investigation of Fly Ash Bricks using Quarry Dust and Cement. The Cement 50% is used. The Quarry Dust is mixed 52% in mix proportions. The specimen was Cured and the Compressive Strength Test was carried out for standard days. To find material's properties, Water Absorption Test, Soundness Test, Size and Shape Test, Density Test were conducted.

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BONAFIDE CERTIFICATE

Certified that this Project report "GROUND WATER QUALITY ASSESSMENT WITH GIS APPLICATION FOR KANJIKODE, PUDUSSERY PANCHAYAT" is the bonafide work of BABLUSANTOSH (720917103011), JILSY J (720917103015), KANCHIVANAM K (720917103017), DEVAPRAKASH P (720917103702), who carried out the Project work under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The self-weight of normal cement concrete varies from 2200 to 2600 kg/m³. This is one of the main disadvantages of conventional cement concrete as this heavy weight of concrete makes it uneconomical structural material. To increase the efficiency of concrete as a structural material attempts have been made to reduce the weight of normal cement concrete. A cement concrete having self-weight ranging from 300 kg/m³ to 1850 kg/m³ is called light weight concrete. A light weight concrete is made by reducing the weight of coarse aggregates. This project is an experiment on the light weight concrete and mainly focused on its compressive strength at 28days. In this the coarse aggregate is fully replaced by plastic aggregates which means recycled plastic waste in the form of chips and partially replacement of fine aggregate by rice husk ash. The project was done on M20 grade of concrete considering the mix ratio as per ACI code provision. All the initial tests which includes the major workability tests like slump cone, compaction factor and the primary test like specific gravity, fineness test etc. The manufacturing of the concrete cubes was done under correct supervision and the compaction was given thoroughly using the tamping rods and also by using vibrators. After all these the cubes are tested with compressive testing machine at 7, 14, and 28 days. The experiment was successful by the result from the compressive strength test at 28 days. As a light weight concrete the weight of the concrete was obtained as 5kg and the density was 1480kg/m³. The density of the light weight concrete varies between 1440kg/m³ to 1840kg/m³. As compared to normal concrete it's density is nearly 2400kg/m³ for PCC and 2500kg/m³ for RCC. As the initial case the weight and density satisfies the concrete as light weight concrete and the compressive strength of light weight concrete at 28days will be 16MPa and the strength we obtained at 28days was 16.01MPa and in the case of compressive strength also the concrete satisfies the rule of light weight concrete.

CONCLUSION

On the study of above-mentioned Project, following conclusion are obtained regarding Fly ash cement bricks:

- Cera Cob Ash is found out to be C Class Fly ash and Have Cementous properties.
- Fly ash cement bricks are comparatively lighter in weight and stronger than the ordinary clay bricks.
- The strength and cost are affected by varying the quantity of fly ash and other ingredient of these bricks.
- Water absorption is less compared to Clay burnt bricks.
- The edges of Fly ash Bricks are good compared to lime bricks and clay bricks.
- Fly Ash Bricks were found to be sufficiently hard as scratching by the finger nail on the surface left no impression on it as compared to normal bricks.

CONCLUSION

The following conclusion can be from the results obtained from the experimental investigations:

- The shear behaviour of concrete beams reinforced with GFRP layer with Basalt fiber and banana fiber shear reinforcement has been presented in our project.
- Adding 1% of sugarcane fiber and banana fiber the compressive strength increases to 3%.
- Both Split Tensile strength test and Flexural strength test increases 4% by adding sugarcane fiber and banana fiber.

CHAPTER: 6

CONCLUSION

Ground water is the main source of water supply for variety purposes including domestic, industrial and so many other activities GIS is an ideal tool for showing the spatial distribution of water of ground water. In the present work, an attempt was made to evaluate and to map the groundwater in the industrial area. The estimated WQI provides an easy way of understanding the overall possibility of water quality. The integration of various thematic layers with the help of ArcGIS 10.3.1 IS of immense help in determining the suitability of ground water quality.

Sampling from every well point available in PK Challa in Jeev Lab analysis of water quality parameter showed that 100% of samples were polluted which were compared well over with standard recommendations by WHO. The thematic maps showed a strong pollution results, i.e. the ground water is not suitable for drinking purposes. The impact made by leachate in contamination of ground water is very high due to the remaining anthropogenic activities including industrial development are the main cause for this contamination. The computed WQI shows that only 0.08% lies in 'excellent' category and 55.3% of water sample falls in the 'safe' water category. On the other hand 41.6% of water samples fall in the 'poor' and 'very poor' categories and which indicates that the water is not suitable for direct consumption and requires treatment.

ABSTRACT

Water is transparent, odourless, tasteless, and nearly colorless chemical substance, it covers about 71% of earth. Different source of water are groundwater, surface water, ocean water, ice caps and glacial melting. Due to rapid increase in density of population, fast urbanization, industrialization, and agricultural demand of water is increasing day by day. As a result of decreasing water level, pollution and increase in demand have made good quality of water scarce and expensive.

Good water serves as main source of water in the urban environment, which is used for drinking, industrial and domestic purposes. Nowadays the ground water is facing threats due to anthropogenic activities. In this study groundwater samples were collected in two different seasons from open wells in Kamloke. The water samples were analyzed for physico-chemical parameters like pH, Total Hardness, turbidity, conductivity, Total Dissolved Solids, suspended solids, chloride, sulphate, Water Quality Index and Total Alkalinity using standard techniques in the laboratory. Also Geographic Information System based ground water quality mapping was developed using Arc-GIS software delineate spatial distribution of physico-chemical characteristics of ground water.



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PLANT LEAF DISEASE DETECTION SYSTEM USING CNN

A PROJECT REPORT

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BACHELOR OF ENGINEERING

IN

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APRIL -2021



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**SECURE MESSAGE TRANSMISSION
USING
BASE 64 ALGORITHM**

JCT

PROJECT REPORT

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**TRANSPORT VEHICLE
MAINTANANCE USING SMARPHONE
APPLICATION**

PROJECT REPORT

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**Student Placement Prediction Using Support
Vector Machine Algorithm**

A PROJECT REPORT

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COLLEGE SOCIAL NETWORKING

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April 2021

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SECURE ENCRYPTED DATA WITH AUTHORISED
DEDUPLICATION CLOUD

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CLOUD DATA AUDITING USING HASHING ALGORITHM

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DETECTING FAKE ONLINE REVIEWS USING SUPERVISED LEARNING

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REAL TIME TRANSLATION OF SIGN LANGUAGE TO TEXT

A PROJECT REPORT

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
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1	720917106001	ABHIJIT.O.P	I	Mrs.D.Vedha Vinodha	Assessing of Sign to Speech using Raspberry Pi and IoT
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4	720917106017	MASILAMANI M			
5	720917106005	ALBIN CHACKO	II	Mr.S.Renswick	Automated Shopping Trolley with E-Payment System
6	720917106301	MOHAMMED RAEES P P			
7	720917106010	GAYATHRI.R			
8	720917106034	VASANTH.D			
9	720917106015	KARNIYA.R	III	Mrs.Thahseen thahir	IoT Based Manhole Monitoring System
10	720917106012	HARIPRASATH R			
11	720917106033	SURUTHILS			
12	720917106022	NATHISHILC			
13	720917106021	NANDHINI S	IV	Mr.K.Babu	Hand Gesture Recognition and Voice Conversion System for Speech Impaired
14	720917106026	SAGAYA MONISHA J			
15	720917106007	ARUN.P			
16	720917106029	SNEHA.R			
17	720917106035	VENNILA.C	V	Mr.S.Renswick	ATM Security System using Face Recognition
18	720917106009	ELANKAVI.K			
19	720917106023	PANDIYARAJAN.B			
20	720917106037	VIJAYALAKSHMI.V			
21	720917106013	ILAIJA BARATHI.A	VI	Mrs.A.Julin Bestina	Accident Alert Generation System using LORA and Internet of Things
22	720917106008	BHARATHI M S			
23	720917106019	MUNIYARAJ.K			
24	720917106038	VINAYACHANDRAN P			
25	720917106004	AJMAL SALEEM M.A	VII	Ms.R.Abinaya	Diabetic Retinopathy Detection using Medical Image Processing
26	720917106031	SUMATHI K			
27	720917106030	SOWNTHIARYA M			
28	720917106039	VISHNU PRASAD C			
29	720917106014	KAMALEESWARL.S	VIII	Mr.M.Chandrasekaran	Adaptable Robotic ARM for Covid-19 Patients
30	720917106006	AMAL.V.C.			
31	720917106016	MAHALAKSHMI.P			




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BONAFIDE CERTIFICATE

Certified that this project report “**DIABETIC RETINOPATHY DETECTION USING MEDICAL IMAGE PROCESSING**” is the bonafide work of “**AJMAL SALEEM M.A, SOWNTHARYA M, SUMATHI K, VINAYCHANDRAN P**” who carried out the project work under my supervision.

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ii




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ABSTRACT

Diabetic Retinopathy is a complication of diabetes that is caused due to the changes in the blood vessels of the retina and is one of the leading causes of blindness in the developed world. Up to the present, Diabetic Retinopathy is still screened manually by ophthalmologist which is a time-consuming process and hence this paper aims at automatic diagnosis of the disease into its different stages using deep Learning. In our approach, we trained a Deep Convolutional Neural Network model on a large dataset consisting of around 3662 images to automatically diagnose and thereby classify high resolution fundus images of the retina into five stages based on their severity. Within this paper, an application system is built which takes the input parameters as the patient's details along with the Fundus image of the eye. A trained deep convolutional neural network model will further extract the features of the fundus images and later with the help of the activation functions like relu along with optimizer like adam An output is obtained. The output obtained from the Convolutional Neural Network (CNN) model and the patient's details will collectively make a standardized report.

Key Words: Automate, diabetic retinopathy, fundus, convolutional neural network, Transfer learning, DenseNet, retina.




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BONAFIDE CERTIFICATE

Certified that this project report " IOT BASED MANHOLE MONITORING SYSTEM " is the bonafide work of " HARIPRASATH.R, KARNIYA.R, NATHISH.C AND SURUTHI.S "who carried the project work under my supervision.

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ABSTRACT

In developing countries, manholes are not monitored properly. These unsupervised manholes can prove themselves to be a threat to lives in various ways. This paper presents an intelligent automatic manhole monitoring system which detects harmful chemicals and toxic gases inside and monitoring a temperature , alerts the authority about the system state. The system can improve overall quality of the surroundings. Hence, the concerned authorities can take proper measures to maintain the manhole. The system has been implemented in an academic environment to carry out the automated monitoring of a manhole to evaluate the proposed features.

Keywords : Smart manhole cover, Sensors, IOT, Smart protection, Smart city, Automated Monitoring System.



BONAFIDE CERTIFICATE

Certified that this project “ **ATM SECURITY SYSTEM USING FACE RECOGNITION**” is the bonafied work of “ **ELANKAVI K , PANDIYARAJAN B, VENNILA C** “ who carried the project work under my supervision.

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ABSTRACT

This paper is about the ATM Security system management, which takes a lot of time consuming and difficult to maintain. There are many biometric processes in that face recognition is the best method. In this paper we are going to describe the ATM Security system without human interference. In this method the camera is fixed in the one place and it will capture the image, the faces are detected and then it is recognized with the database and finally the ATM Security Voting system is work on it. There are various methods for comparing the faces. The Eigen face is the one of the method. Eigen faces is set of Eigen vectors which are used in computer vision problem of face recognition.

Key Points : Image Recognition , Python , RFID – RC522 – Security System



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BONAFIDE CERTIFICATE

Certified that this project report "HAND GESTURE RECOGNITION AND VOICE CONVERSION SYSTEM FOR SPEECH IMPAIRED" is the bonafide work of "ARUN P, NANDHINI S, SAGAYA MONISHA J, SNEHA R," who carried out the project work under my supervision.

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ABSTRACT

Our matter of concern in this project is to develop an efficient system which will assist mute people in not only making mundane conversations with their peers effortlessly but also carry out their daily chores efficiently without being entirely dependent on others. In our country around 2.78% of peoples are not able to speak ie. dumb and deaf. Their communications with others are only using the motion of their hands and gestures. Our project proposed a new technique called artificial speaking mouth for dumb people. This system is based on a motion sensor. For every action the motion sensors get accelerated and give the signal to the microcontroller. The microcontroller matches the gesture with the database and produces the speech signal. The output of the system is using the Audio Module. By updating the database the dumb will speak like a normal person using the artificial mouth. The system also includes a text to speech conversion (TTS) block that interprets the matched gestures.

Key Words: Assist system, gesture recognition, AWS cloud service, Text to Speech conversion (TTS).



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BONAFIDE CERTIFICATE

Certified that this project report, "**ADAPTABLE ROBOTIC ARM FOR COVID-19 PATIENTS**" is the bonafied work of "**AMAL.V.C, KAMALEESWARIS, MAHALAKSHMI.P, VISHNUPRASAD.C**" who carried out the project work under my supervision.

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II




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ABSTRACT

In this pandemic, the most important people are the health care workers. Without proper PPE, many of our health care workers are losing their lives to Covid-19. Let's go into the life of a health care worker. Imagine you are a health care worker treating a COVID patient. You are scared to treat them for fear of catching the virus, even with PPE. Now with a medical robot arm, you can control all the actions to treat patients from a safe distance. Giving food, water, medicine and taking different readings from patients has never been easier. This robot arms can be controlled with the health care worker's Smartphone from a safe distance.

The robotic arms are movable so the robotic arm can be used in an entire ward using a customized android app. In the android app it carry some variables in it anyone can easily control this without any confusion .The movable robotic arm can reduce the work of health care workers and provide safety and protection to their life. This robotic arm carry a rechargeable high power battery in it .In this robotic arm also using a pi camera for the life streaming and video recording purpose. This robotic arm is very cost effective and it is very useful in this pandemic situation.

The covid pandemic is a starting and we can expect this kind of pandemic in future and that also affect the life of health care workers. This kind of robotic arms reduce the work of health care workers and protect their life.



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BONAFIDE CERTIFICATE

Certified that this project report "ASSESSING OF SIGN TO SPEECH USING RASPBERRY PI AND IOT" is bonafide work of "ABHIJIT.O.P , AGALYA.R , MASILAMANIM , SIBIN.K.S. " who carried out the project under my supervision

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ABSTRACT

This project proposes the recognition of sign gestures and categorize into allotted audio outputs. In general the sign gestures are image processed and specific audio outputs are assigned for each gesture through which it will be helpful for a blind or a mute person to have his/her needs done in an efficient and effortless manner.

Moreover this ideology can be established in current pandemic scenario where it is preferred to maintain a safe distance between an contagious person so in order to overcome this problem this prototype can be equipped near the contagious person and with the audio output received from this the persons daily needs or specific requirements can be met with being in contact with the person itself. This project is developed in such a way that it is efficient as well as can be remotely used in households as well as in the outdoor too.

This project is user friendly and doesn't require prior knowledge about the working due to which this can be equipped in the households as a help seeking device for the elderly and bedridden person with the help of which the person can be in contact with the family members for getting his needs done according to his convenience. With the 24/7 powered distress button the person can alert his family members also his consulting doctor with an sms and buzzer.



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BONAFIDE CERTIFICATE

Certified that this project report "ACCIDENT ALERT GENERATION SYSTEM USING LORA AND INTERNET OF THINGS" is the bonafide work of "BHARATH M.S, ILAIA BARATHLA , MUNIYARAJ .K AND VIJAYA LAKSHMI.V" who carried the project work under my supervision.

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ABSTRACT

In today's scenario the usage of vehicles have increased at a larger scale. The increased vehicular traffic, has also increased the traffic hazards and the road accidents take place frequently which causes huge loss of life and property because of the poor emergency facilities. Due to huge traffic, emergency vehicles like ambulances are not able to reach their destinations in time, resulting into loss of human lives. Along with the advent in the medical field, admission of the patient to the hospital at the right time is required to save one's life.

Many systems indulge can be used as full to implement the smart ambulance transportation, we have developed a cost effective system with the LoRa Technology,IOT modules, GPS modules and latest high speed microcontrollers to achieve the desired results. The primary objective is to identify the accident, for this we implement a vibration sensor the accident is detected and using the Lora technology it sends the location of accident to the control unit and with the help of IOT location is send to the Cloud thus sends this information to the nearest hospitals in the 10Km boundry around the accident location.

Thus this system will help to save a person's life mostly in Urban and Rural areas.

Key Words: Automate, lora network, IOT modules, Vibration sensor, GPS location, long range.



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BONAFIDE CERTIFICATE

Certified that this project report "AUTOMATED SHOPPING TROLLEY WITH E-PAYMENT SYSTEM" is the bonafide work of "ALBIN CHACKO, GAYATHRI R, VASANTH D, MOHAMMED RAEES PP" who carried out the project work under my supervision.

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ABSTRACT

In metro cities we can see you a huge rush at shopping malls on holidays and weekends. This becomes even more when there are huge offers and discounts. Nowadays people purchase a variety of items and put them in the trolley. After total purchasing one should approach counter for billing purpose. By using barcode reader the cashier prepares the bill which is a time consuming process .This results in long queues at the billing counters. This project presents an idea to develop a system in shopping mall s to overcome the above problem. For this the trolley should have a web camera. Today every product has a barcode or QR codes. When one puts any product in the trolley its code will be detected automatically by the web camera, the item name and cost will be displayed on the mobile display and the database of the admin, the cost gets added to the total bill. If we wish to remove the product from the trolley, you can take away the product and the amount of that specific product gets deducted from total amount and the same information passes to the central billing unit via raspberry pi module. Hence the billing can be done in the trolley itself thereby saving a lot of time to the customers.

Keywords: Barcode, web camera, raspberry pi, monitor, LCD display, mobile display, web server, switch



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STUDENTS PROJECT BATCH LIST

S.NO	REG NO	NAME	BATCH	TITLE	PROJECT GUIDE
1.	720917105002	Akhil V	I	Energy Meter Based Wireless Monitoring System Using Blynk Application via Smartphone	S Umarmuktar
2.	720917105007	Faseela C M			
3.	720917105025	Sharukhan P G			
4.	720917105026	Shafeeq K K			
5.	720917105008	Gunasanthuru N	II	Automatic Voting System Using Convolutional Neural Network	S Manikandan
6.	720917105016	Rajesh D			
7.	720917105017	Ramesh P			
8.	720917105020	Rathisheelan K			
9.	720917105011	Krishna Devi N	III	Arduino Based Women Safety Security System Using GPS and GSM	D Nagarajan
10.	720917105014	Mohanapriya			
11.	720917105024	Seedevi P			
12.	720917105029	Nisha V			
13.	720917105012	Manoj M	IV	Upstage Avoiding An Gesture Control Robotic With Sensor	C Prakash
14.	720917105019	Ranjith Kumar M			
15.	720917105028	Vallarasu T			

16.	720917105301	Adarsh V H	V	Addressing Deaf or Hard of Hearing People in Avatar – Based Mixed Reality Collaboration Systems	P Sam Jasper
17.	720917105302	Jinson J K			
18.	720917105022	Sandheep Kumar P			
19.	720917105701	Afsal Mohamed E K	VI	Intelligent Irrigation System and Crop Protection From Wild Animals Using Microcontroller	S Umarmuktar
20.	720917105001	Ajith K			
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**INTELLIGENT IRRIGATION SYSTEM AND
CROP PROTECTION FROM WILD ANIMALS
USING MICROCONTROLLER**



A PROJECT REPORT

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ABSTRACT

This paper proposes the intelligent irrigation system and crop protection from wild animals using micro controller. water wastage is main problem in agriculture sector. The setup uses soil moisture sensor which measures the moisture content in the soil . Other than soil moisture sensor, we are using humidity sensor, temperature sensor and rain detector , in order to get the accurate and perfect measures that has to be taken for a good and better cultivation and therefore more profit. Animal tracker is used in our project to secure our agricultural farm from animals which is very destructive.

Irrigation management is a complex decision making process to determine when and how much water to apply to a growing crop to meet specific management objectives. If the farmer is far From the agricultural land he will not be noticed of current conditions. So, efficient water management plays an important role in the irrigated agricultural cropping systems .. This project probes into the design of the automated irrigation system based on Arduino UNO . This Embedded project is to design and develop a low cost feature which is based on embedded platform for water irrigation system. This project uses temperature and soil moisture sensors to detect the water quantity present in agriculture. The project uses Arduino UNO micro controller which is controller to process the information .

CHAPTER 9

FUTURE SCOPE AND CONCLUSION

This smart irrigation system can be adjusted and modified according to the changing environment . Animal protection system can be more accurate by detection of the accurate animal in accurate distance Drones can be used for sowing seeds and for spraying pesticides

The problem of crop destruction by wild animals has become a serious problem for the farmer. Effective solution and urgent attention are needed to solve this serious problem. To solve the problem of farmer we have designed a smart earlier detection and protection system with the help of IOT. The main aim is to prevent the loss of crops and protect agricultural forming area from wild animals which causes major damage to the agricultural area. As the detection of presence of animals near the forest boarder its very helpful to take early precautions. So, our technical approach will be helpful to the farmers in protecting fields and save them from financial losses and also saves them from unproductive efforts that they endure for the protection of their fields. Measuring four parameters such as soil moisture, temperature , humidity and the system also includes intruder detecting system. Due to message updates farmer can know about crop field nature at anytime , anywhere and we can avoid wastage of water, soil irrigation, and over irrigation



**ADDRESSING DEAF OR
HARD-OF-HEARING PEOPLE IN
AVATAR-BASED MIXED REALITY
COLLABORATION SYSTEMS**



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APRIL 2021

ABSTRACT

Automatic Speech Recognition (ASR) technologies can be used to address people with auditory disabilities by integrating them in an interpersonal communication via textual visualization of speech. Especially in avatar-based Mixed Reality (MR) remote collaboration

systems, speech is an important additional modality and allows natural human interaction. Therefore, we propose an easy to integrate ASR and textual visualization extension for an avatar-based MR remote collaboration system that visualizes speech via spatial floating speech bubbles. In a small pilot study, we achieved word accuracy of our extension of 97% by measuring the widely used word error rate.




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CHAPTER 5

LIMITATIONS, FUTURE WORK AND CONCLUSION

As a drawback, our system only works with Windows OS. This can be seen as a limitation but most MR systems already use this operating system. Nevertheless, a big advantage of using Windows in combination with the integrated MASR is that it automatically supports multiple languages out of the box (determined by the systems standard language, e.g. English, German, Spanish, Mandarin, etc.). In combination with the MR remote telepresence system, a variety of scenarios can be addressed. Currently, communication is only possible in one direction. There are hearing impaired people who can still speak, but for those who cannot, new methods need to be evaluated. A solution could be, for example, prepared answers that only need to be selected. Another problem is the readability of the text. The problem can be minimized with distance independent fonts. We chose a naïve approach of black text in front of a white background. Based on the pixel layout, some HMDs have a higher resolution for green content (e.g. Pentile Matrix). We made sure that the readability was constant throughout the pilot study. But speech is not only an auditive representation of textual information. The intonation and sound level are as important as the textual information itself. That is why sign language is the most expressive and accurate way to communicate with deaf or hard-of-hearing people. It is faster to understand and is more expressive compared to a simple textual representation.



UPSTAGE AVOIDING AN GESTURE CONTROL ROBOTIC WITH SENSOR



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ABSTRACT

Recently, strong efforts have been made to bridge the gap between human and computer-based system by making the interactions (which were via input devices like keyboards and mouse) as natural as possible through gesture controls. Gesture recognition is useful for processing information from humans which is not conveyed through speech or type. The main objective of this work is to control a robot with gestures of our hand. There are two main components that are used in the system, an Arduino microcontroller and an accelerometer.

Gesture Controlled Car is a robot which can be controlled by simple human gestures. The user just needs to wear a gesture device in which a sensor is included. The sensor will record the movement of hand in a specific direction which will result in the motion of the robot in the respective directions. The robot and the Gesture instrument are connected wirelessly through radio waves. User can interact with the robot in a more friendly way due to the wireless communication. We can control the car using accelerometer sensors connected to a hand glove. The sensors are intended to replace the remote control that is generally used to run the car. It will allow user to control the forward, backward, leftward and rightward movements, while using the same accelerometer sensor to control the throttle of the car. Movement of car is controlled by the differential mechanism. The mechanism involves the rotation of both forth & rear wheels of left or right side to move in the anticlockwise direction and the other pair to rotate in the clockwise direction which makes the car to rotate about its own axis without any kind of forward or backward motion. The main advantage of this mechanism is the car with this mechanism can take sharp turn without any difficulty. The design and implementation of a gesture control robotic arm using flex sensor is proposed. The robotic arm is designed in such a way that it consists of four movable fingers, each with three linkages, an opposing thumb, a rotating wrist and an elbow. The robotic arm is made to imitate the human hand movements using a hand glove.

CHAPTER 11

11. CONCLUSION

The proposed system, in which the user can navigate the robot in the environment using various gestures commands. The main objective is to provide reliable and a more natural technique for the user to navigate a wireless robot in the environment using gestures. This is plan includes the huge utilization of these days accessible trendsetting innovation in the field of installed hardware and unguided correspondance with the most noteworthy level of security and straight forwardness in application.

The robotic actions via cord consistent with palm gesture. The robotic can pass approximately 300 mtr. The expected efficiency is achieved with the above mentioned handheld device and in future we are aiming to replace the wired component with wireless technology. And it is expected to perform more efficiently such as increase in the distance travelled by the robot and the physical limitation is overcome. This robots can be upgraded to detect human life styles earthquake and landslide by ways of enforcing the sensor therefore it can also be upgraded to bomb detecting robotic because it has robotic arm it may additionally elevate the bomb which is positioned at distant location. And these type of methodology can be used in rescue operation to view the sight without any complexity. The matter of fascination of this undertaking is that it gives a brilliant measure of advantages in a financially save away. The task is all around figured out how to react to the sensor activities inside seconds and produce an alive picture on the show care gadget simultaneously. The proposed system will give the intelligent system which can controlled by the hand gestures, it works on the device accelerometer which has transmitter and received.



**ARDUINO BASED WOMEN SAFETY
SECURITY SYSTEM USING GPS AND GSM**



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ABSTRACT

Every day, every woman, young girls, mothers and women from all walks of life are struggling to be safe and protect themselves from the roving gaze of the horribly insensitive men who molest assault and violate the dignity of women on a daily basis. The streets, public transport, public places in particular have become the dominion of the hunters. Due to these atrocities that women are subjected to in the present scenario, a smart security wearable device for women based on Internet of Things is proposed. It is implemented in the form of a button which is connected on the micro controller. This device is extremely portable and can be activated by the victim on being assaulted. Just by the click of a button that will fetch her current location and a message is send to message to nearest police station also we fixed some alert message and also provide shocking.

7.CONCLUSION

Being safe and secure is the demand of today. Our effort behind this paper is to design and fabricate a gadget which is so compact in itself that provide advantage of personal security system. This design will deal with most of the critical issues faced by women and help them to be secure. Existing systems provide the mechanism to track the vehicle but no other emergency mechanism is proposed. The proposed mechanism provides viewing the location of the victim in terms of latitude and longitude which can further be tracked using Google maps. This system helps to decrease the crime the crime rate against women. Women's security is a critical issue in current situation. These crimes can be brought to an end with the help real time implementation of our proposed system.



AUTOMATICAL VOTING SYSTEM USING CONVOLUTIONAL NEURAL NETWORK

A PROJECT REPORT

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Abstract:-

This project is about the Automatical Voting system management. The Automatical Voting system will replace the manual method, which takes a lot of time consuming and difficult to maintain. There are many biometric processes in that face recognition is the best method. In this paper we are going to describe the Automatical Voting system without human interference. In this method the camera is fixed in the one place and it will capture the image, the faces are detected and then it is recognized with the database and finally the Automatical Voting system is work on it. In this methods all the lable images are training through the convolutional neural network that experience is store in one model name after user input is compare to experience model and predict the output.

CHAPTER 10

CONCLUSION

There are many biometric processes of in there best face recognition is the best method. In this paperbe we are going to describe the Automatical voting system without human interference. In this method the camera is fixed in the one place and it will capt the image, the faces dedicated and then it is recognized with the database and finally the Automatical voting syste work on it. In this methods all the lable image are be use training through th convolutional neural network that experience is store in one model name after user input is compare to experience model and predict the output.



ENERGY METER BASED WIRELESS MONITORING SYSTEM USING BLYNK APPLICATION VIA SMARTPHONE



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ABSTRACT

This paper proposes the wireless monitoring system of energy meter using Blynk application via smartphone. In addition, the used of battery's backup power supply and over consumption of energy notification as an optional feature embedded in this system. Due to the advance recent technology in tandem with the Internet of Things (IoT) can be also applied in advance as an application of Artificial Intelligence (AI) into a manual device, transitional to an automated device such as smart meter that helps the smart cities to have an efficient energy management system as a new concept. This system used ESP32 as a micro-controller board with Wi-Fi module to provide IoT communication with IoT platform such as Blynk application. The prototype designed intends to monitor daily energy consumption in the smartphone application interfaced with Blynk server and also provide awareness to save electricity through notification using Blynk features by the smartphone application.

CHAPTER 8

CONCLUSION

This paper presented a system to measure household energy consumption with the option to monitor and record power consumption with one second resolution. The monitored data can be remotely transmitted or stored locally on a memory card. The system is based on a single microcontroller to measure the voltage and current waveforms, parameter calculation and monitoring interface. The voltage and current sensors are placed on the mains board to monitor the whole household. The system measures the whole power consumption and individual appliance using pattern identification. This allows the identification of energy usage distribution among appliances and enables a better energy usage management. For example, it allows concluding that periodic operating appliances together with always ON equipment account for more than 40 % energy usage. Although this system was designed for energy metering and monitoring it can be expanded to include other sensors or interfaces. An example is a temperature and humidity sensor to help evaluate the energy needs for heating or cooling in air conditioning system. It can also generate a warning when the value of contract power is reached.



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DEPARTMENT OF FOOD TECHNOLOGY

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Team No.	Reg.No	Students name	Guide name	Project title
1	720917218011 720917218012 720917218019 720917218023 720917218055	BHARATH A BHARATH T GOWTHAM S KAVIN KUMAR S SRIRAM R	Dr.G.GNANAVEL	DEVELOPMENT AND QUALITY EVALUATION OF WAFFLES INCORPORATED WITH PEARL MAILLET
2	720917218024 720917218037 720917218038 720917218049 720917218056	LOGANATHAN N NISHA S PADMAPRIYA A SANGEETHA M SUBHADHINI P	Dr.G.GNANAVEL	UTILIZATION OF PACKAGING MATERIAL FROM KOMBUCHA SCOBY
3	720917218001 720917218002 720917218009 720917218054 720917218060	AADHIL PK ABDUL VAJID P ARUN A N SOORAJ G TILJO SUNNY	Dr.V.VIJAYAGOPAL	PRODUCTION OF BAKED PRODUCTS FROM BREWER'S SPENT GRAIN
4	720917218005 720917218022 720917218026 720917218047 720917218062	AGNA THOMAS KARTHIKA DINESH MEERA THAKACHAN RISVANA SHERMILA MARY S	Ms.SANGEETHA GANDHI S	FORTIFICATION OF BRED WITH CALCIUM FROM EGG SHELL
5	720917218017 720917218040 720917218041 720917218061	GOWSALYA C POORANI V PRAKASH M VISHALI M	Ms.THAMARAI P	DEVELOPMENT OF LACTOSE FREE PANEER AND ANALYZE THE QUALITY CHARACTERISTICS

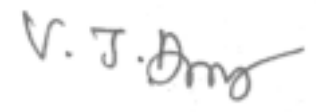
6	720917218006 720917218008 720917218013 720917218046 720917218057	AISWARYA S ANAMIKA S DHANYA SHREE T RIFNA M RAFI SULFIA M M	Mrs.RUTH KEZIAH	DEVELOPMENT OF VALUE-ADDED CANDY BY VALORIZATION OF BLACK GRAPE POMACE
7	720917218004 720917218027 720917218028 720917218030 720917218053	AFNA N MOHAMED IRSHA D MOHAMED JISHA D MOHAMMED ANAS TP SHAHIN SHAJ MA	Mr.SURESH C	PREPARATION OF ORANGE FLAVOURED MAYONNAISE
8	720917218007 720917218016 720917218020 720917218025 720917218039	AMRITHA M GOVINDARAJ T JISHNA P MARYAM S PARANEESWARAN K	Ms.THAMARAI P	CHICKEN INCORPORATED INSTANT PASTA



(Dr.G.Gnanavel)




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 JCT College of Engineering and Technology
 PICHANUR, COIMBATORE - 641 105


PRINCIPAL
 JCT College of Engineering and Technology
 PICHANUR, COIMBATORE - 641 105.

DEVELOPMENT AND QUALITY EVALUATION OF WAFFLES INCORPORATED WITH PEARL MILLET

A PROJECT REPORT

Submitted by

BHARATH A (720917218011)

BHARATH T (720917218012)

GOWTHAM S (720917218019)

KAVIN KUMAR S (720917218023)

SRIRAM R (720917218055)

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

IN

FOOD TECHNOLOGY

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY



ANNA UNIVERSITY: CHENNAI 600 025

APRIL/MAY 2021

**UTILIZATION OF PACKAGING MATERIAL FROM
KOMBUCHA SCOBY**

A PROJECT REPORT

Submitted by

LOGANATHAN.N (720917218024)

NISHA.S (720917218037)

PADMAPRIYA.A (720917218038)

SANGEETHA.M (720917218049)

SUBHADHINLP (720917218056)

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IN

FOOD TECHNOLOGY

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE – 641 105



ANNA UNIVERSITY - CHENNAI 600 025

March 2021

**PRODUCTION OF BAKED PRODUCTS FROM
BREWER'S SPENT GRAIN**

A PROJECT REPORT

Submitted by,

AADHIL P.K	(720917218001)
ABDUL VAJID PUNAKKATH	(720917218002)
ARUN A.N	(720917218009)
SOORAJ G	(720917218054)
TILJO SUNNY	(720917218060)

in partial fulfilment for the award of the degree

of

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IN

FOOD TECHNOLOGY

**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,
COIMBATORE - 641105**



ANNA UNIVERSITY

CHENNAI – 600 025

APRIL 2021

ANNA UNIVERSITY: CHENNAI 600 025

FORTIFICATION OF BREAD WITH CALCIUM FROM EGG SHELL

A PROJECT REPORT

Submitted by

AGNA THOMAS (720917218005)
KARTHIKA DINESH (720917218022)
MEERA THANKACHAN (720917218026)
RISVANA (720917218047)
SHERMILA MARY S (720917218062)

*in partial fulfillment of the requirements for the degree
of*

**BACHELOR OF TECHNOLOGY
IN
FOOD TECHNOLOGY-**

**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
COIMABATORE - 641105**



ANNA UNIVERSITY: CHENNAI 600025

APRIL 2021

**DEVELOPMENT OF LACTOSE FREE PANEER AND ANALYZE
THE QUALITY CHARACTERISTICS**

A PROJECT REPORT

Submitted by

C. GOWSALYA	(720917218017)
V. POORANI	(720917218040)
M. PRAKASH	(720917218041)
M. VISHALI	(720917218061)

in partial fulfillment for the award of the degree

Of

BACHELOR OF TECHNOLOGY

IN

FOOD TECHNOLOGY

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE – 641105



ANNA UNIVERSITY - CHENNAI 600 025

MAY 2021

**DEVELOPMENT OF VALUE ADDED CANDY BY
VALORIZATION OF
BLACK GRAPE (*Vitis vinifera*) POMACE**

A PROJECT REPORT

Submitted by

AISWARYA S	(720917218006)
ANAMIKA SASIKUMAR	(720917218008)
DHANYA SHREE T	(720917218013)
RIFNA M RAFI	(720917218046)
SULFIA M M	(720917218057)

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of

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**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,
COIMBATORE – 641105**



**ANNA UNIVERSITY, CHENNAI 600025
APRIL / MAY 2021**

PREPARATION OF ORANGE FLAVOURED MAYONNAISE

A PROJECT REPORT

Submitted by

AFNAN	(720917218004)
MOHAMED IRSHAD	(720917218027)
MOHAMED JISHAD	(720917218028)
MOHAMMED ANAS TP	(720917218030)
SHAHIN SHAJ MA	(720917218053)

in partial fulfillment for the award of the degree of

**BACHELOR OF TECHNOLOGY
IN
FOOD TECHNOLOGY**

**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY,
COIMBATORE - 641105**



**ANNA UNIVERSITY, CHENNAI 600025
APRIL 2021**



**JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE - 641105
DEPARTMENT OF PETROCHEMICAL ENGINEERING**



**PROJECT DETAILS
BATCH 2017 2021**

Handwritten signature

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

APRIL/MAY 2021 END SEMESTER EXAMINATIONS								
	College Code:	7209	College Name: JCT College of Engineering and Technology			Semester: VIII		
	Subject code:	PM6811	Subject Name: Project (Viva-Voce)					
S N O	NAME OF THE PROGRAM AND BRANCH	BATCH NUMBER WITH TIME	REGISTRATION NO. OF THE STUDENT	NAME OF THE STUDENT	TITLE OF THE PROJECT WORK	NAME OF THE SUPERVISOR WITH STAFF ID	NAME OF THE INTERNAL EXAMINER WITH STAFF ID	NAME OF THE HOD/FACULTY APPOINTED BY THE HOD TO ACT AS EXTERNAL EXAMINER WITH STAFF ID
1	B.E Petrochemical	B-1 (10.00 am - 10.15 am)30.7.21	720917139008	Ajith m	Optimizing and Production of Factamfos	Ms.Drisya G. Chandran	Dr.S.Kavitha	
			720917139301	Amal Francis				
			720917139035	Fayiz rahman kk				
2	B.E	B-2	720917139026	Aswin Raj	Manufacture of Methyl Ethyl	Ms. V.P	Dr.S.Kavitha	

	Petrochemical	(10.20 am - 10.35 am)	720917139039	Harikrishnan P	Ketone from Secondary Butyl Alcohol	Kalpana			
			72017139041	Harish V					
			720917139055	Muhamed Afzal A.K					
3	B.E Petrochemical	B-3 (10.40am -10.55 am)	72017139025	Ashish Tom	Production of Acetaldehyde	Mr. K.Balasubramani	Dr.S.Kavitha		
			720917139003	Abhinav PK					
			720917139010	Akash S					
			720917139013	Akshay Saseendran					
4	B.E Petrochemical	B-4 (11.00 am -11.15 am)	720917139022	Arshin Raj	optimization of Benzoic Acid	Dr.S.Kavitha	Dr.S.Kavitha		
			720917139011	Akshay K S					
			720917139033	Divy Rajeev					
			720917139031	Dhaun K S					
5	B.E Petrochemical	B-5 (11.20 am - 11.35 am)	720917139020	Anthony Leandor	Development of Nusselt Number based on Dimensional Analysis Method on Plate Heat Exchanger	Mr.G.Arumugam	Dr.S.Kavitha		
			720917139052	Lifno J.S					
			720917139053	Manikandan S					
			72017139054	Maria Esthak Jones S					
6	B.E Petrochemical	B-6 (11.40 am -11.55 am)	720917139038	Hariharan R	Extraction of Phenol from mixed vegetables	Dr.S.Kavitha	Dr.S.Kavitha		
			720917139306	Jenoprasath					
			720917139023	Arun					
			720917139108	Sudhakar					
7	B.E Petrochemical	B-7 (12.00pm -12.15 pm)	720917139004	Abhiram S	Preparation of sulfuric acid and process optimizatoin by comparing variousdesign of final heatexanger	Ms.Drisya G. Chandran	Dr.S.Kavitha		
			720917139015	Amaldev V					
			72091713917	Ananthu Ashokan					
			720917139030	Bhuvanay Vijayan					
8	B.E Petrochemical	B-8 (12.20 pm - 12.35)	720917139001	Aakash G	Production of Cumene vil Alkylation by using Benzene and Propylene and it's Plant Modeling using DWSIM	Ms. V.P Kalpana	Dr.S.Kavitha		
			720917139028	Avinash R					
			720917139029	VijayBalaji K					

		pm)	720917139048	Karthick Raja			
9	B.E Petrochemical	B-9 (12.40 pm - 12.55 pm)	720917139027	Athira P.T	Design of an absorber for the removal of H ₂ S from flue gas using diethanol amine	Dr.S.Kavitha	Dr.S.Kavitha
			720917139044	jeneetta George			
			720917139050	Kiran Raj S			
			720917139304	Digil Jose			
10	B.E Petrochemical	B-10 (1.30 pm - 1.45 pm)	720917139021	Aromal R nair	Production of Hydrogen Peroxide from Methanol	Ms.S.Sasiya	Dr.S.Kavitha
			720917139005	Abin Chandran			
			720917139012	Akshay P			
			720917139060	Muhammad Jassim			
11	B.E Petrochemical	B-11 (1.50 pm - 2.05 pm)	720917139009	Ajmal Juraini	Production of Bio-Fuel from Neem Oil and Experimental Investigation on CI Engine by using Biodiesel and it's blends	Ms.S.Sasiya	Dr.S.Kavitha
			720917139058	Mohamed Thammemul Ansari			
			720917139032	Dinakaran			
			720917139059	Muhammad Daanish			
12	B.E Petrochemical	B-12 (2.10 pm - 2.25 pm)	720917139043	P Janarthanan	Characterisation and Bio-Synthesis of Aqueous Silverano Particle by using Ocimum Sanctus leaves	Dr.S.Kavitha	Dr.S.Kavitha
			720917139056	S Muhamed Aslam			
			720917139057	Mohamed Halith			
			720917139105	Sreehari Rajeev			
13	B.E Petrochemical	B-13 (2.30 pm - 2.45 pm)	720917139036	Gowtham B	Extraction of Silica from Agrowaste	Dr.S.Kavitha	Dr.S.Kavitha
			720917139037	Haribabu			
			720917139016	Anandha Selvan			
			720917139047	Karan S			
14	B.E Petrochemical	B-14 (2.50 pm - 3.05 pm)	720917139066	Muhammed Mubarak PK	Pyrolysis of Plastics	Dr.P.Dhanasekaran	Dr.S.Kavitha
			720917139067	Muhammed Mubashir M			
			720917139082	Raimin			

				Santhosh			
			720917139099	Shamil Ali P			
15	B.E Petrochemical	B-15 (3.10 pm- 3.25 pm)	720917139065	Muhammed Isahak T N	Effect of Soot Blower on Boiler Efficiency	Ms.Drися G. Chandran	Dr.S.Kavitha
			720917139071	Naveen Kumar P R			
			720917139074	Peter Paul Mathew			
			720917139117	Vaishnav K			
16	B.E Petrochemical	B-16 (3.30 pm - 3.45 pm)	720917139106	Stephin Thomas	Reduction of Oil Spillage using Wood Plastic Composite	Ms. V.P Kalpana	Dr.S.Kavitha
			720917139119	Vipin Mohan N			
			720917139309	Ranjith T R			
			720917139310	Suraj Krishna K R			
17	B.E Petrochemical	B-17 (3.50 pm - 4.05 pm)	720917139062	Mubashir V M	Perevaporative DeSulfurisation of Gasoline Separation of Thiophene/ n-heptane mixture	Mr.A.I.Flavian	Dr.S.Kavitha
			720917139088	Safil Badarudeen			
			720917139024	Asgar Ali PA			
			720917139103	Shiyas MK			
18	B.E Petrochemical	B-18 (4.10pm- 4.25pm) 30.7.21	720917139046	J.C John Towesdilin	Development of Nusselt Number by Wilson Plot Method on Plate Heat Exchanger	Mr.G.Arumugam	Dr.S.Kavitha
			720917139083	G. Rakshaya			
			720917139086	D., Regha			
			720917139107	S.S Subitha			
19	B.E Petrochemical	B-19 (10.00 am - 10.15 am)31.7.21	720917139049	M. Keerthika	Dyes Removal from Wastewater Treatment using Orange Peel	Mr. K.Balasubramani	Dr.S.Kavitha
			720917139061	N. Monisha			
			720917139070	M. Nava Harini			
			720917139104	T. Shobika			
20	B.E Petrochemical	B-20 (10.20 am - 10.35	720917139069	Nalif Ahamed	Production Bio degradable Plastic from Raggi	Dr.S.Kavitha	Dr.S.Kavitha
			720917139118	Vigneshwaran			
			720917139078	Praveen Kumar			

		am)	720917139090	Sakthivel			
21	B.E Petrochemical	B-21 (10.40 am - 11.05 am)	720917139114	M. Tharunisri	Desulphurisation of Biogas	Dr.S.Kavitha	Dr.S.Kavitha
			720917139098	T. Selva			
			720917139094	S. Saran			
			720917139045	L. Jerald Jino			
22	B.E Petrochemical	B-22 (11.10 am - 11.25 am)	720917139112	S. Syed Mubarak Basha	Extraction of Perfume from Orange Peels using Steam Cracking	Mr.G.Arumuga m	Dr.S.Kavitha
			720917139303	S. Bharath			
			720917139093	M. Santhosh Sriram			
			720917139076	Pragadheeswar an			
23	B.E Petrochemical	B-23 (11.30 am - 11.45 am)	720917139307	J. Kaushik Ram	Production of Biogas by using Cowdung and Kitchen Waste	Mr.J.Saravanan	Dr.S.Kavitha
			720917139077	A.K Praveen Kumar			
			720917139312	V. Muralithar Pradeep Kumar			
			720917139115	Thiyagarajan			
24	B.E Petrochemical	B-24 (11.50 am - 12.05 pm)	720917139034	C. Elavarsan	Performance Improvement in Multifluid mix ratio by varying Mixing Chamber Baffles	Ms.S.Sasiya	Dr.S.Kavitha
			720917139040	G. Hari Krishanan			
			720917139096	R. Saran Kumar			
			720917139068	A.V Mukesh			
25	B.E Petrochemical	B-25 (12.10 pm - 12.35 pm)	720917139081	Rahul Radhakrishnan	Production of Organic Pesticides from Custard Apple Seeds	Dr.S.Kavitha	Dr.S.Kavitha
			720917139116	Vaishakh CS			
			720917139102	Shibin Siraj PK			
			720917139063	Muhamed Shiyas V V			
26	B.E Petrochemical	B-26 (12.40 pm - 12.55 pm)	720917139101	Shem Scilus Lahari Krishna	Treatment of Dye Waste Water using Zinc oxide Nanoparticles as Photocatalyst	Dr.S.Kavitha	Dr.S.Kavitha
			720917139089	Sai Krishna			
			720917139097	Sathish Krishnan			

			720917139113	Thariq Basha				
27	B.E Petrochemical	B-27 (1.30 pm - 1.45 pm)	720917139075	Pradeep Kumar C	Manufacture of Pyropetrol from Plastics	Ms. V.P Kalpana	Dr.S.Kavitha	
			720917139110	Suman V				
			720917139092	Santhosh Kumar				
			720917139095	Saran S				
28	B.E Petrochemical	B-28 (1.50 pm - 2.05 pm)	720917139084	Rameshkumar B	Development of Nusselt Number of Carboxyl Methyl Cellulose using same Flow Analysis	Mr.G.Arumugam	Dr.S.Kavitha	
			720917139085	Ranjith M				
			720917139109	Sugumar T				
			720917139111	Surya R				
29	B.E Petrochemical	B-29 (2.10 pm - 2.35 pm)	720917139091	Santhosh B	Production of Biodiesel from Corn Oil	Ms.Nimisha N. Gopalan	Dr.S.Kavitha	
			720917139019	Anistheen P				
			720917139308	Kiran K.V				
			720917139087	Resavu Mohideen H				
30	B.E Petrochemical	B-30 (2.40 pm - 3.05 pm)	720917139079	Raashith Mohamed	Extrraction Of Limonene From From Fruit Peels	Ms. Sasya.S	Dr.S.Kavitha	
			720917139701	Santhosh.R				
			720917139501	Santhosh Kumar				

**Dr S Kavitha
HOD/PCE**


PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 103.

PRODUCTION OF ORGANIC PESTICIDES FROM CUSTARD APPLE SEEDS

PROJECT REPORT

Submitted by

RAHUL RADHAKRISHNAN	720917139081
VAISHAKH C S	720917139116
SHIBIN SIRAJ P K	720917139102
MUHAMED SHIYAS V V	720917139063

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

In

PETROCHEMICAL ENGINEERING

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE,641105



ANNA UNIVERSITY: CHENNAI

APRIL 2021

ANNA UNIVERSITY: CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report “**PRODUCTION OF PESTICIDES FROM-
CUSTARD APPPLE SEEDS**” is the bonafide work of “**RAHUL.RADHAKRISHNAN
VAISHAKH.C.S, SHIBIN SIRAJ.P.K, MUHAMED SHIYAS V V**” who carried out
the project work under my supervision.

Dr P. DHANASEKARAN M.E., Ph.D.

HEAD OF THE DEPARTMENT.

Department of Petrochemical Engineering

JCT College of Engineering and Technology

Dr. S.KAVITHA M.E., Ph.D.

SUPERVISOR

Associate Professor

Department of Petrochemical Engineering

JCT College of Engineering and Technology



Submitted for the Anna University Examination Held On.....

INTERNAL EXAMINER

EXTERNAL EXAMINER

DECLARATION

We affirm that the project report titled on “**PRODUCTION OF ORGANIC PESTICIDES FROM CUSTARD APPLE SEEDS**” being submitted in partial fulfillment of the requirements for the award of Bachelor of Engineering is the original work carried out by us. It is not formed the part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Date:

(Signature of the candidates)

RAHUL RADHAKRISHNAN

VAISHAKH C S

SHIBIN SIRAJ P K

MUHAMED SHIYAS V V

I certify that the declaration made by the above candidates is true to the best of my knowledge.

Date:

Name and Signature of the Supervisor

Dr. S.KAVITHA M.E.,Ph.D

Associate Professor,
Department of Petrochemical Engineering
JCT College of Engineering and Technology
Coimbatore-641105.

S.NO.	JUSTIFICATION	POs, PSOs
1.	Apply Extraction Technique knowledge and Interpersonal skills about various methods to improve Production of Organic Pesticides.	
2.	Create innovative methods and ideas to effectively apply the new technology used in the project to the industrial level.	
3.	Develop suitable methods to analyse materials assemble equipment and to execute the project work.	
4.	Compare the features of available current technologies and imply new methodology to production of Organic Pesticides.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, and PO12, PSO1 and PSO2.
5.	Depend the features of completed project report with the result obtained from their experimental work, in line with literature.	





1.3.3 Number of students undertaking project work/field work/ internships

List of students undertaking project work/field work/internship	Name of the project title
Students Name	
SACHIN KUMAR SINGH DIBISH J. JUTEN PETER M. SUNDARAPANDIYAN	PETROLEUM PRODUCTION OPERATION
R.NAVEEN S. R. SRIRAM S. NANTHAKUMAR P. DHANUSH	PAHSE BEHAVIOR STUDIES ON RESERVOIR FLUID
B.LAVANYA J.RUBINTOM SALMAN KHAN MAHATHEER MOHAMED	WORKOVER IMPACT ON ACCIDENTAL RISK
DHIVAKAR.S MAHARAJA.M NAVANEETHAN.N RAGHULKANNAN.R.S	MULTISTAGE HYDRAULIC FRACTURING IN HORIZONTAL WELLS
GNANASEKARAN.S KAVIYARASU.M MUSTAQAHAHAMED.A PAVITHRAN.K	MATERIAL BALANCE EQUATION FOR OIL RESERVOIR WITH DEPLETION DRIVE
AKILESH.K NAWIN.T NETHAJI.P PRADEESH.M	SOLVING THE PROBLEM IN LOST CIRCULATION WHILE DRILLING
AMRITHA N KRISHNA	DIGITAL CORE ANALYSIS
ADARSH CHANDRAN HRITHIK PRAKASAN	NANOTECHNOLOGY IN PETROLEUM INDUSTRY
ASHIN.S.S KANNAN.V.S HARIKRISHNAN. V LIBIN JOSEPH	STUDY OF HORIZONTAL AND VERTICAL DRILLING EQUIPMENT



JCT College of Engineering and Technology

Pichanur Coimbatore-641105

Department of Petroleum Engineering



1.3.3 Number of students undertaking project work/field work/ internships

Adhidev Krishna PJ Anand MV Ajay C Suresh Muhammed Jasil PK	DRILLING FLUID OVER VIEW
MOHAMMED SHAHIN MOHAMMED SHEZIN NABEEL NOUSHAD SAJIN K	PETROLEUM ECONOMICS
Vishnu palachuvattil, Harikrishnan N, vinod	Blowout incidents
Arun Chand Ajay S M Muhammed Akash Vishnu T S	Catalytic pyrolysis of waste plastic to liquid fuel: study the effect of nanocrystalline cellulose on fuel production .
B. AISWARYA	WELL STIMULATION JOB IN OIL AND GAS INDUSTRY
HARIHARAN S ESAKKI SELVAM M DHINESH KUMAR G	DRILLING OPERATIONS
ASHOK KUMAR.V KISHORE.C BRIGHTON BALAN.J SANTHA KUMAR.M	VARIOUS OPERATIONS INVOLVED IN BOTTLING OF LPG CYLINDERS

3.5

ANNA UNIVERSITY: CHENNAI-600025

BONAFIDE CERTIFICATE

Certified that this project report "CATALYTIC PYROLYSIS OF WASTE PLASTIC TO LIQUID FUEL: STUDY THE EFFECT OF NANOCRYSTALLINE CELLULOSE ON FUEL PRODUCTION" in the bonafide work of "VISHNU TS, MUHAMMED AKASH MK, AJAY SM, ARUN CHAND" who carried out the project work under my supervision.


SIGNATURE

Dr. S. VENKATESH BABU,
HEAD OF THE DEPARTMENT

Department of Petroleum Engineering,
JCT College of Engineering &
Technology,
Pichannur, Coimbatore-641105

SIGNATURE

RAHNA SIRAJ,
SUPERVISOR

Assistant Professor,
Department of Petroleum Engineering,
JCT College of Engineering &
Technology,
Pichannur, Coimbatore-641105

Submitted for the Project Viva-Voce Examination held on


INTERNAL EXAMINER

EXTERNAL EXAMINER



ABSTRACT

Plastic waste is a major threat to environment, Disposal and controlling of plastic waste is a difficult task in the modern society. Pyrolysis is an efficient method which makes these wastes very useful in the production of hydrocarbons which are the mainstay of fuels. Liquid fuel can be prepared from plastic waste by pyrolysis method which can be helpful in the disposal of plastic waste.

The main objectives of this works are to fabricate a system from which oil can be extracted through pyrolysis process and to reduce the harmful effects of plastic waste in our society. It can be also solving the issue of rising fuel needs by using biofuel extracted from plastic as a fuel substitution.

The treated plastic waste and Calcium oxide catalyst are fed into pressure cooker at various catalysts to polymer ratio. The obtained oil properties are enhanced by adding Nanocrystalline cellulose (NCC) nanoparticles. The properties of NCC with oil are approximately similar to conventional fuel such as diesel. Hence it can conclude that catalytic pyrolysis of plastic into fuel can solve both the problem of plastic waste management as well as shortage of fossil fuel if plant is set up at the commercial level.

Keywords:

pyrolysis, pomaces, nano crystalline cellulose, plastic fuel, calcium oxide.



ANNA UNIVERSITY: CHENNAI 600 025

APRIL 2021

BONAFIDE CERTIFICATE

Certified that this project report "**PETROLEUM ECONOMICS**" is the bonafide work of SAJIN K, NABEEL NOUSHAD, MOHAMMED SHAHIN, MUHAMMED SHEZIN who carried out the project work under my supervision.


HOD
Department of Petroleum Engineering

SIGNATURE

DR. S. VENKATESH BABU

SUPERVISOR

PROFESSOR & HOD

PETROLEUM ENGINEERING

JCT COLLEGE OF ENGINEERING
AND TECHNOLOGY


SIGNATURE

MR. JANARDHANAN

ASST. PROFESSOR

PETROLEUM ENGINEERING

JCT COLLEGE OF ENGINEERING

AND TECHNOLOGY



1. INTRODUCTION

The topic deals with the economic theory, empirical perspectives, and political economy of petroleum supply and demand. It aims to broaden our knowledge in local, national, and global markets for oil, natural gas and public policies affecting energy markets, including taxation, price regulation and deregulation.

Economics drives the entire oil or petroleum industry. Almost every decision is made on the basis of an economic evaluation.

Economic evaluations are also performed to determine reserves and the "standardized measure of value" for reporting purposes for publicly held companies.

Economics in the petroleum industry differentiates the field to three main parts as the differentiation is essential to explain the huge economical background of the industry.

- 1. Petroleum Production**
- 2. Petroleum Distribution**
- 3. Petroleum Consumption**



ANNA UNIVERSITY : CHENNAI-600025


BONAFIDE CERTIFICATE

Certified that this project report " MATERIAL BALANCE EQUATION FOR OIL RESERVOIR WITH DEPLETION DRIVE " is the bonafide work of " GNANASEKARAN.S (720917219020)., PAVITHRAN.K (720917219045)., KAVIYARASU (720917219027)., MUSTAQ AHAMED.A (720917219037)" who carried out the project work under my supervision


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Submitted for the Project Viva-Voice Examination held on
.....

INTERNAL EXAMINER

EXTERNAL EXAMINER



1. INTRODUCTION OF THE PROJECT

We express deep sense of gratitude and sincere thanks to karaikal ONGC (Cauvery asset) for providing all data facilities need in the preparation of this project

1.1 HISTORY OF CAUVERY ASSET

Actually, the history of Cauvery Asset started in the year 1966 when oil and natural gas was found in Cauvery Basin. From the date of its establishment, the organization had been keen on achieving its goals. Today with the contribution of 1140 employees, it is marching head towards the new globalized world with new targets. Cauvery Asset is headquartered at Neravy, in Karaikal, in union of Territory of Pondicherry. Cauvery Asset is unique compared to other Assets in many ways. The areas of operations of Cauvery Asset are in two states Tamil Nadu and Pondicherry. The Cauvery Asset's operational areas extending an area of 27,800 sq.km on land approximately 3000 sq.km on offshore. In Tamil Nadu, exploration and production activities are spread over in Nagapattinam, Ramanadhapuram, Thiruvarur, Thanjavur and Cuddalore districts. Further areas of operations in Cauvery asset are spread over 100 km north of Neravy to 400 km of south of Neravy, from 26 production fields, 144 layers and 210 wells.

Initially, the Project/Asset started as an oil producing Project/Asset, this has gone to become a major gas producing unit. The drilling in Cauvery Asset started for the first time in 1964. A drilling holiday was declared in 1977 and after detailed scrutiny of the findings; the second phase of drilling was commenced in 1984. The main operational areas of Cauvery Asset are Narimanam, Kuthalam, Kamalapuram, Adiyakamangalam, Kovilkalappal, Ramanadhapuram and so on. The achievement of the organization become possible with the help of seven business groups such as drilling, surface, sub-



ANNA UNIVERSITY
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UNIVERSITY EXAMINATIONS -APRIL/MAY EXAMINATION,2021

JCT COLLEGE OF ENGINEERING&TECHNOLOGY,COIMBATORE
DEPARTMENT OF MECHANICAL ENGINEERING
2017-2021 BATCH

SL.NO	REG.NO	NAME	TITELTLE OF THE PROJECT	NAME OF THE GUIDE	BATCH
1	720917114007	ABIN MATHEW.P	HYPER ALL TERRAIN AUTOMATED STROLLER CHAIR FOR DISABLED.	ANANDA KUMAR.D	B1
2	720917114006	ABIN BOBY.T			
3	720917114005	ABHISEK.P			
4	720917114045	JIBIN REJI			
5	720917114048	JOHN KURIYAN	PNEUMATIC STEP CLIMBINGWEIGHT LIFTER	DR.I.J.ISAAC PREM KUMAR	B2
6	720917114051	JUSTIAN K JAYAN			
7	720917114002	ABHIDEV.P.S			
8	720917114035	GOVINDASWAMY.S	RAILWAY TRACK CRACK DETECTION MACHINE	MALAI RAJA	B3
9	720917114046	JISHNU.M			
10	720917114004	ABINAV.M			
11	720917114011	AJITH.P.U			
12	720917114049	JOHN SAMUEL	DESIGN AND FABRICATION OF LEVER OPERATED PNEUMATIC GEAR SHIFTED FOR TWO WHEELER	ASHOK KUMAR.D	B4
13	720917114020	ANSIL KAPOOR			
14	720917114003	ABHINAND			
15	720917114037	HAMIL ZAKRIYA			
16	720917114030	DURAIRAJ	FOLDING MACHINE	MALAI RAJA	B5
17	720917114041	JAMKANNAN			
18	720917114042	JANAKIRAMAN			
19	720917114702	ANTO RESLIN RAJ			
20	720917114021	ANUSH MOHAMED	SELF DRIVING CAR	RAMAKRISHNAN	B6

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21	720917114001	ABDUL HADEE			
22	720917114014	AKHIL K.M			
23	720917114058	MANUSKARIYA			
24	720917114029	DIVYA PRASANTH.P	REGENERATIVE BRAKING SYSTEM	RAMAKRISHNAN	B7
25	720917114053	KAVIN.C			
26	720917114040	JAFRIN.B			
27	720917114057	MANIKANDAN.K			
28	720917114039	IJAS ASLAM	PERFORMANCE ANALYSIS OF PV MODULE	ANANDA KUMAR.D	B8
29	720917114031	EBENEZER TOMSON			
30	720917114061	MOHAMMED AYYOOB			
31	720917114060	MOHAMMED RIYAS UNNEEN			
32	720917114032	GITHIN K J		KARTHICK.K	B9
33	720917114050	JOHN VARGHEESE			
34	720917114008	AFRITH RAHMAN	DESIGN AND FABRICATION OF IOT CONTROL AUTOMOBILE SCREW JACK FOR LIGHT AND HEAVY TRANSFORT VECHILE	DR.PRABHAKAR	B10
35	720917114022	ASHKAR T A			
36	720917114047	JITHIN M			
37	720917114114	VIPIN V			
38	720917114052	KARTHIK.V	SOLAR PANEL SUN TRACKING SYSTEM	DR.G. MAGESH	B11
39	720917114043	JAYAKRISHNAN			
40	720917114023	ASWIN			
41	720917114013	AKHIL C M			
42	720917114017	AMAL ABEY	AUTOMATIC WALL PAINTING ROBOT	THILLIKANI	B12
43	720917114019	ANCIL P JOSE			
44	720917114027	CHRISTOPHER JOSHIBA			
45	720917114015	AKHIL DAS			
46	720917114028	DINESH BABU.S	PULLEY BASED MOVABLE CRANE ROBOT	RAMAKRISHNAN	B13
47	720917114033	GOPI.M			

5/2

48	720917114038	HEMACHANDRAN.M			
49	720917114009	AHAMED SHAMEER MUSTAFA			
50	720917114065	MUHAMMED SAFWAN	INDUSTRIAL FLOOR CRANE	Mr. K. Karthick	B14
51	720917114088	ROSHAN SIMON			
52	720917114093	SETTIN JOSEPH			
53	720917114301	ARJUN E S			
54	720917114067	NANDHAKUMAR.S	AUTOMATIC LIFT DOOR MECHANISM	Dr. I.J.Isaac Premkumar	B15
55	720917114078	RAGUL.B			
56	720917114086	REGURAJAN.K			
57	720917114111	VIGNESHWARAN.L			
58	720917114064	MUHAMMED HASHIM	AUTOMATIC WASTE SEGREGATION SYSTEM	Dr. I.J.Isaac Premkumar	B16
59	720917114071	NITHIN V J			
60	720917114080	RAHUL.P.R			
61	720917114084	RASHID ALI K.P			
62	720917114070	NIDHEESH K K VARMA	PNEUMATIC SHEET METAL CUTTING MACHINE	Dr.J. Prabhar	B17
63	720917114087	RIMAS PM			
64	720917114115	VISHNUDAS.T			
65	720917114116	YADHUKRISHNAN			
66	720917114077	PRINSAN.S	AIR PURIFIER AND HUMIDIFIER USING WATER FILTER	Mr. K. Krishnakumar	B18
67	720917114107	TIJO SUNNY			
68	720917114108	TONY GEORGE			
69	720917114117	ZAHIL			
70	720917114079	RAHIL.NP	DIGITAL FUEL LEVEL INDICATOR	Mr. R. Mahendran	B19
71	720917114081	RAHUL RAJ.V.K			
72	720917114090	SALMAN.K			
73	720917114106	VIMAL.C			

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74	720917114101	SREERAG T R	DESIGN AND ANAYSIS OF VAWT USED IN RECOVERY OF ENERGY FROM EXHAUST AIR	Mr. D.Ashok kumar	B20
75	720917114103	STENVIN E J			
76	720917114105	SUHAIL.K			
77	720917114113	SUHAIL.S			
78	720917114060	PRADEEPAN.K	FABRICATION OF PEANUT SEPARATOR	Mr. S. Settu	B21
79	720917114091	SATHISH.A			
80	72091711496	SHEIK DAWOOD.J			
81	720917114304	DHANYA SREE V			
82	720917114082	RAJAVEL B	SENSOR OPERATED AUTOMATIC REVERSE BRAKING SYSTEM	Mr. R. Mahendran	B22
83	720917114083	RANJITH KUMAR.A			
84	720917114120	CHINTHANAI SELVAN			
85	720917114307	MURUGAN.S			



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**INVESTIGATION OF ACTUATOR
MECHANISM IN 3D BLANKING MACHINE
IN SHEET METAL OPERATIONS**

A PROJECT REPORT

Submitted by

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JANAKIRAMAN.N - 720917114042
ANTO RESLIN - 720917114701
RAJ X**

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in**

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AUGUST 2021



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who carried out project under my supervision

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It has been submitted for the Anna University Project Viva-Voce held on

.....

INTERNAL EXAMINE

EXTERNAL EXAMINER



**SELF DRIVING VEHICLE BASED ON
ARTIFICIAL INTELLIGENCE USING MACHINE
LEARNING**

A PROJECT REPORT

SUBMITTED BY

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MANU SKARIA	720917114058

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Of

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IN

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JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE

ANNA UNIVERSITY: CHENNAI 600 025

APRIL 2021



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INTERNAL EXAMINER

EXTERNAL EXAMINER



**DESIGN AND FABRICATION OF BOREWELL CHILD
RESCUE MACHINE**

Submitted by

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APRIL 2020

BONAFIDE CERTIFICATE

Certified that this Report titled “**BOREWELL CHILD RESCUE MACHINE**” is the bonafide work of **SREEKUMAR.S,VIGNESH.J,VIGNESH.T.R,VIGNESH SASINDRAN BINDU** who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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ABSTRACT

In the past few years, there have been several accidents of children falling into abandoned bore wells in India. Abandoned bore wells have turned into death pits for children. Rescue teams spend hours and sometimes days in futile attempts to save these little kids. A lot of money is also spent in these missions. In most cases they are unable to save the kids. Such events have happened numerous times in the past, and every time either the government or the bureaucracy is blamed. The rescue process to save the child from bore well is a long and complicated process. The rescue team tries to approach the victim from a parallel well that take about 20-60 hours to dig. This complicated process makes 70% of the rescue operations fail. Very few of the victims have been saved in such accidents. Recently some autonomous robots came on to screen to take out the trapped body in a systematic way. But the question rises, why these bots are not in action in the real world. This brings out safety that how far the robot handles the child safely. The rescue operation mainly consists of three processes; Approaching the Child, Handling the body, Taking child out of the well



SOLAR PANEL SUN TRACKING SYSTEM

A THESIS

Submitted by

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INTERNAL EXAMINAR

EXTERNAL EXAMINAR

A handwritten signature in black ink, appearing to be 'S. S.', is located at the bottom left of the page.



**SELF DRIVING VEHICLE BASED ON
ARTIFICIAL INTELLIGENCE USING MACHINE
LEARNING**

A PROJECT REPORT

SUBMITTED BY

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APRIL 2021



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INTERNAL EXAMINER

EXTERNAL EXAMINER

DESIGN AND FABRICATION OF INTELLIGENT BREAKING SYSTEM

A PROJECT REPORT

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MARCH 2020



ABSTRACT

The technology of pneumatics has gained tremendous importance in the field of workplace rationalization and automation from old-fashioned timber works and coal mines to modern machine shops and space robots. It is therefore important that technicians and engineers should have a good knowledge of pneumatic system, air operated valves and accessories. The air is compressed in an air compressor and from the compressor plant the flow medium is transmitted to the pneumatic cylinder through a well laid pipe line system. To maintain optimum efficiency of pneumatic system, it is of vital importance that pressure drop between generation and consumption of compressed air is kept very low.

The aim is to design and develop a control system based an intelligent electronically controlled automotive braking system is called “**INTELLIGENT BREAKING SYSTEM**”. This Braking system is consists of IR transmitter and Receiver circuit, Control Unit, Pneumatic breaking system. The IR sensor is used to detect the obstacle. There is any obstacle in the path, the IR sensor senses the obstacle and giving the control signal to the breaking system. The pneumatic breaking system is used to break the system.





POWER GENERATION USING SPEED BREAKERS

A PROJECT REPORT

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IN
MECHANICAL ENGINEERING**

ANNA UNIVERSITY : CHENNAI 60025

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BONAFIDE CERTIFICATE

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DESIGN AND FABRICATION OF AUTOMATED GUIDED VEHICLE

A PROJECT REPORT

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MARCH 2020

ABSTRACT

In our project we are eliminating the need of conveyers, pallet trolley, etc to handle material transfer in heavy industries. For purpose we are designing automated guided vehicle controlled by microprocessor controller. In the available methods of material handling manpower, fuel power is used. By the end of 2020, fuel deposit in the world completely depleted.

To avoid this type of problems and reduce manpower requirement we need other type of automation is called automated guided Vehicle. The microcontroller is used to control the vehicle path automatically. The rechargeable battery is supplying power.





**ANALYSIS OF HEAT TRANSFER
COEFFICIENTS OF FERROFLUID
AND OTHER COOLANTS**



A PROJECT REPORT

Submitted by

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APRIL 2020

ABSTRACT

The major problem facing by an electrical device or a mechanical device is heat dissipation. In electrical devices like computers heavy heat generation reduces the performance of it. Also in mechanical devices to heat generally affect the performance of the component. For that now many heat dissipation methods are applying. One of them is using of coolants. The coolants which are majorly using are Water, cooling oils, Ethylene glycol, etc. Heat transfer ability of water can be increased by adding magnetite to it. All of these variant coolants have various performances. Some may have more ability of heat transfer some may have lesser. So here we analysed various coolants.

We synthesized magnetite nanoparticles in chemistry lab and made ferrofluid using it. From the experimental observations we found that we can increase the heat transfer ability of ferrofluid by increasing the volume concentration of magnetite in ferrofluid. We found the heat transfer coefficient of each coolant using the parallel and counter flow heat exchangers. High concentrated ferrofluid is having higher heat transfer ability than water and ethylene glycol & water mixture.

