



RVS COLLEGE OF ENGINEERING AND TECHNOLOGY, Coimbatore
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

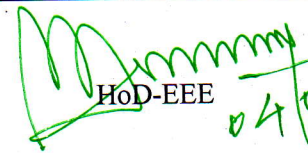


IV Year- PROJECT LIST

Academic Year-2022-2023(Even Semester)

BATCH NO.	REGISTER NO.	STUDENTS NAME	TITLE OF THE PROJECT	GUIDE NAME
1	712819105005	JEYLES M	ONLINE MONITORING AND PRODUCTION FOR TRANSFORMER USING SAMRT GUI APP	Mr.P.Kumar
	712819105011	PERIYASAMY V		
2	712819105006	KAVIN SM	HYBIRD POWER GENERATION USING SOLAR AND WIND ENERGY	Dr.L.Senthil Murugan
	712819105012	SATHEESHKUMAR S		
3	712819105007	MANOJ KUMAR P	DEVOLOPMENT OF A FACIAL FEATURES MONITORING FOR REAL TIME DOWNSINESS DETECTION AND ACCIDENT DETECTION SYSTEM	Dr.T.Senthilkumar
	712819105015	VIGNESH S		
4	712819105008	MUHAMMED SHIBILI P K	AI WITH ML BASED AUTOMATIC ELECTRICITY POWER DISTRIBUTION CONTROL FOR PREVENTING PUBLIC LIFE FROM RAIN HAZARDS	Dr.T.Vinothkumar
	712819105302	SUKESH S		
5	712819105301	HARI VIGNESH G	FASTEST HYBRID POWER PLANT SWITCHING USING WEB SERVER DURING PRECARIOUS PERIOD	Mr.C.Madhan Kumar
	712819105004	BHARATHKUMAR V		
6	712819105001	ABIU SANTHOSH M	INDUSTRIAL MONITORIND AND CONTROL USING IOT	Dr.K.Thangarajan
	712819105003	ARUNAN P		
7	712819105701	ANAND R	SPEED CONTROL OF ELECTRIC VEHICLE BY USING BLDC MOTOR	Dr.S.S.Sivaraju
	712819105010	NAVEEN KUMAR K		
	712819105014	TAMILSELVAN J		

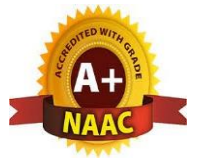

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HOD-EEE
04/03/2023



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**INDUSTRIAL MONITORING AND CONTROL USING
INTERNET OF THINGS**

APROJECTREPORT

Submitted by

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ARUNANP (712819105003)

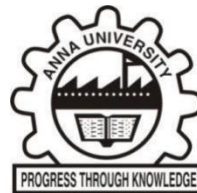
In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

ELECTRICAL AND ELECTRONICS ENGINEERING



RVS COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE-641 402

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2023

ANNA UNIVERSITY : CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report “**FASTEST HYBRID POWER PLANT SWITCHING SCHEMES USING WEB SERVER DURING PRECARIOUS PERIOD**” is the bonafide work of “**BHARATHKUMAR.V (712819105004), HARIVIGNESH.G (712819105301)**” who carried out the project work under my supervision.



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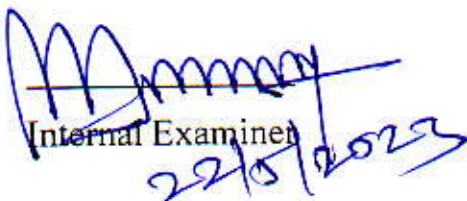


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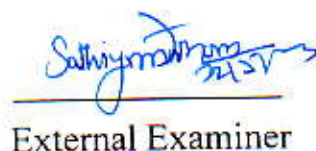
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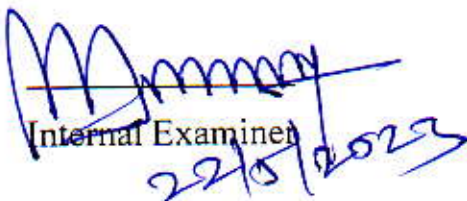


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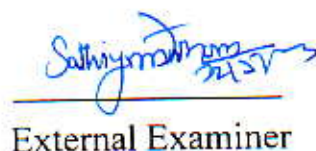
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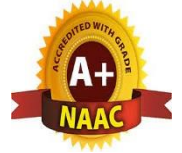
ABSTRACT

Industrial Monitoring and Control is essential to collect all the relevant information, statistics and data related to the various industrial processes, motors, machines and devices employed in industry premises. This aims at controlled access, better productivity and high-quality results of industrial products being manufactured. In this new era of technological developments remote control and monitoring via communication techniques such as ZigBee, RF, Infrared, techniques have been widely used in Industries. However, these wireless communication techniques are generally restricted to simple applications because of their slow communication speeds, distances and data security. In addition, they are easily affected by noise and bad weather conditions such as snow, fog and rain. In the Present project, a new solution is adopted for the traditional monitoring and controls of Industrial applications through the implementation of Internet of things (IOT) using high quality communication, low cost and high security.



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CONCLUSION

We hope to gain hands-on experience with the trending technologies of "Embedded System" and "Internet of Things" through this project. IoT-enabled industrial monitoring systems have become increasingly popular in a variety of industries because they improve safety standards by providing real-time monitoring of critical parameters such as temperature, humidity, and smoke, as well as alerting officials and workers regularly. The implementation is not only for safety reasons, but it also has the potential to increase industry yields. In our project, the Internet of Things (IoT) is used to collect data and communicate through the internet. We hope that our project will be beneficial enough to be implemented in industries across India, saving lives and property from accidents and risks that are often overlooked by industry personnel and users. Companies in the industrial and logistics sectors can better meet the new era of instant needs by utilizing the Industrial Internet of Things (IIoT). IIoT technologies are used in manufacturing processes and across supply chains in the Industrial Internet of Things. Industrial IIoT strategy should include machine learning and big data technology in addition to data from devices and sensors, harnessing the combination of existing sensor data, machine to machine (M2M) connectivity, and automation technologies to deliver greater insight back to the business.



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FASTEST HYBRID POWER PLANT SWITCHINGSCHMES USING WEB SERVER DURING PRECARIOUS PERIOD

PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree of

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MAY 2023

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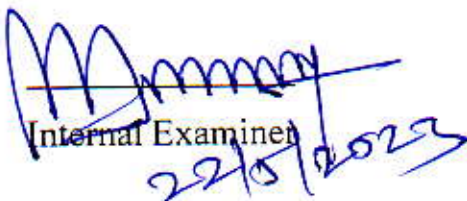


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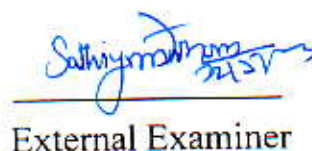
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ABSTRACT

In modern technological development for power switching, demand for uninterrupted power services. Electrical source is vital for the progress of a nation and it has to be conserved in a most efficient manner. Not only the technologies should be developed to produce energy in a most environment-friendly manner from all varieties of fuels but also enough importance should be given to conserve the energy resources in the most efficient way. As need or demand of electricity is increasing, use renewable energy sources to generate more amount of energy in the industries and home appliances is also increasing. The renewable energy sources such as solar and wind hybrid generation system are economical, freely available in the environment. The use of renewable energy technology to meet the energy demands has been steadily increasing for the past few years, however, the important drawbacks associated with renewable energy systems are their inability to guarantee reliability and their lean nature. Import of petroleum products constitutes a major drain on our foreign exchange reserve. Renewable energy sources are considered to be the better option to meet these challenges. The two main reasons to design hybrid power plant system using the renewable energy source are power reliability in varying weather condition and cost. In the proposed system, we are introducing the reliability to deliver continuous supply of load, monitoring and emergency switching process during precarious periods with the help of IoT (web server) interfacing. The system consists of a wind turbine, PV solar, charge controller, battery, inverter, grid and IoT system for monitoring electrical parameters of the system. Advantage of IoT system is that the operator can know the updated electrical parameters from anywhere and anytime.

Keywords: Hybrid power, Web server (IoT), UPS, Renewable Energy etc.,



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CONCLUSION

The system is successfully completed to control the operation of power grid using internet protocol. All the grid connections are interfaced with controller unit and IoT module. This hybrid system can be standalone or can be grid connected. The grid connected hybrid system is more reliable to deliver continuous power because if there is any shortage of power or fault in the renewable energy sources then the load are directly connected to the grid. The controller controls the hybrid power plant operation through the command via internet connectivity.



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HYBRID POWER GENERATION USING SOLAR AND WIND ENERGY

A PROJECT REPORT

Submitted by

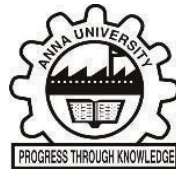
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MAY 2023

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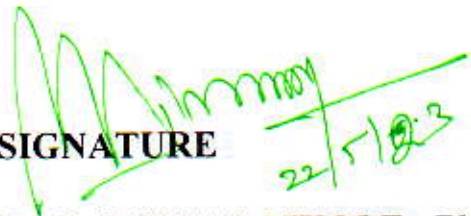


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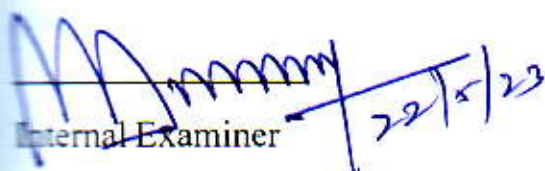
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ABSTRACT

The ultimate aim of this project is to construct a savonius type of vertical axis wind turbine that will be combined with a solar panel to create direct current (DC) electricity that will be used to charge a battery. This system will meet the house's basic electrical needs. When combined with a solar panel, the device may generate more amount of electricity. The major goals of this project are to decrease pollution and preserve the environment by reducing the use of fossil fuels, increasing windmill power output, and developing hybrid machines to create more electricity with zero emissions. Reaching the non-electrified rural population is currently not possible through the extension of the grid, since the connection is neither economically feasible, nor encouraged by the main actors. Further, the increases in oil prices and the unbearable impacts of this energy source on the users and on the environment, are slowly removing conventional energy solutions, such as fuel-based systems, from the rural development agendas. This problem can overcome by using “HYBRID POWER GENERATION USING SOLAR AND WIND ENERGY”. Hybrid systems have proved to be the best option to deliver “high quality” power.



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CONCLUSION

Final design, which will quench the need for an alternative energy solution available on a residential level. Looking forward, our windmill's uses could be expanded to government highways, commercial high rise buildings, schools, beach fronts, etc. The possibilities are only as limited as the creativity of the user-wind envelops the human race daily. The solution to our energy supply worries has blustered mankind preceding electricity. While these works are being completed a huge amount of knowledge has been collected and vast area in the CFD field has to be explored. Sometimes weeks have been spent for solving problems in fluent which encountered in simulations. Throughout the simulation process more than 400 simulations have been done and each simulation was spent around 1-2 hours' time to be simulated. For those simulations more than 50 meshes have been drawn. In the case of simulations most of the Laptops available easily were hardly fulfilled the requirement of the software. So the simulating speed had been reduced. So, lot more time has to be spent on it. For some problems came across some areas of the software had to be explored. Those problems were unique problems for user to user. Then there weren't enough information in internet too. Then wearers had to be explored with great courage. So it is all about learning new and challenging things. As the results were presented with respect to C_p , then it also had to be rearranged and process the data that had been obtained by the simulations. So the data had to be recorded correctly and in a proper manner for the easiness of the Reading and processing. But attend we could manage to finish the simulation part within the time period that it is allocated. In the fabrication process lot of knowledge has been grabbed about the practical aspects and how to do certain things in workshop. We were given money for the project. That was very help full to achieve our primary goal.



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**ONLINE MONITORING AND PRODUCTION FOR
TRANSFORMER USING SAMRT GUI APP**

A PROJECT REPORT

Submitted by

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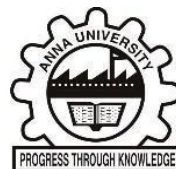
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Certified that this project report "ONLINE MONITORING AND PRODUCTION FOR TRANSFORMER USING SMART GUI APP" is the bonafied work of "JEYLES M (712819105005), PERIYASAMY V (712819105011)" who carried out the project work under my supervision.


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CONCLUSION

This system provides schemes for ensuring that personnel performing energized electrical work, including oil temperature, vibration testing and diagnostics are trained in the safety aspects of such work and have been qualified by their supervisor to perform the task assigned. The system offered by transformer health safety associated with this program covers personal safety issues regarding work on electrical distribution systems and includes relative information to be gathered while analyzing electrical-related hazards.

The system is successfully completed for monitoring the transformer health by using through sensors, GUI-APP and BLUETOOTH device



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**ARTIFICIAL INTELLIGENCE WITH MACHINE LEARNING BASED AUTOMATIC
ELECTRICITY POWER DISTRIBUTION CONTROL FOR PREVENTING
PUBLIC LIFE FROM RAIN HAZARD**

A PROJECT REPORT

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Certified that this project report "ARTIFICIAL INTELLIGENCE WITH MACHINE LEARNING BASED AUTOMATIC ELECTRICITY POWER DISTRIBUTION CONTROL FOR PREVENTING PUBLIC LIFE FROM RAIN HAZARD" is the bonafied work of "MUHAMMED SHIBILI P K (712819105008), SUKESH S (712819105302)" who carried out the project work under my supervision.


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CONCLUSION

In this project is very useful and real time project. It can be utilized all type of distribution / transmission lines. This project successfully designed for communicating the information about the breaking of EB power line to near EB station or corresponding officers. We proposed an EB line fault or broken detection system and it will send an immediate response to control unit of electricity board. The circuit uses Nvuoton Microcontroller to communication with the digital display to send the text. The information will then be quickly processed by the microcontroller for save the human life.

Finally, the project is done successfully and it verified in hardware model with 99% efficiency.



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**SPEED CONTROL OF
ELECTRICVEHICLEBYUSINGBLDCMOTOR**

A PROJECT REPORT

Submitted by

NAVEEN KUMAR K (712819105010)

TAMIL SELVAN J (712819105014)

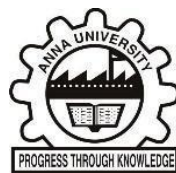
ANAND R (712819105701)

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Certified that this project report “**SPEED CONTROL OF ELECTRIC VEHICLE BY USING BLDC MOTOR**” is the bonafide work of “**NAVEEN KUMAR K (712819105010), TAMILSELVAN J (712819105014) ANAND R (712819105701)**” who carried out the project work under my supervision.


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External Examiner
22/5/23



RVS COLLEGE OF ENGINEERING AND TECHNOLOGY

KumaranKottam Campus, Kannampalayam (PO), Coimbatore – 641 402
(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)
NAAC A+ Accredited and ISO 21001:2018 Certified Institution



ABSTRACT

A motor converts supplied electrical energy into mechanical energy. Various types of motors are in common use. Among these, brushless DC motors (BLDC) feature high efficiency and excellent controllability, and are widely used in many applications. Brushless DC motors have some significant advantages over their competitors, such as brushed motors, largely because of the electronic commutation. It allows the controller to switch the current promptly and thus regulate the motor's characteristics effectively. The BLDC motor has power saving advantages relative to other motor types. In this project we are going to control the speed of the brushless motor it is important to control the speed of the motor because it has a direct effect on the operation of the machine and is crucial for the quality and the outcome of the work. The speed of the motor is controlled by power electronics makes the motor more effective and efficient. Power electronics means converting one form of electric power into another form of electric power with proper control. This paper provides a technical review of position and speed sensor less methods for controlling Brushless Direct Current (BLDC) motor drives, including the background analysis using sensors, limitations and advances. The performance and reliability of BLDC motor drivers have been improved.



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CONCLUSION

- Thus this project is used to control the brushless DC motor.
- The booster used here to control the voltage and current of the BLDC motor.
- From which the inverter and speed controller controls the speed of the motor.
- The calculated speed is displayed using LCD used in this project.



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**ONLINE WITH NON-CONTACT TRANSFORMER
HEALTH PREDICTION SYSTEM
USING SMART GUI APP RAIN HAZARDS**

PROJECT REPORT

Submitted by

JEYLES.M 712819105005

PERIYASAMY.V 712819105011

In partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING



RVS COLLEGE OF ENGINEERING AND TECHNOLOGY

COIMBATORE 641402

ANNAUNIVERSITY :: CHENNAI 600025

MAY 2023

BONAFIDE CERTIFICATE

Certified that this project report “**DEVELOPMENT OF FACIAL FEATURES MONITORING FOR A REAL TIME DROWSINESS AND ACCIDENT DETECTION SYSTEM**” is the bonafied work of “**VIGNESH S (712819105015), MANOJKUMAR P (712819105007)**” who carried out the project work under my supervision.

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INTERNAL EXAMINER

EXTERNAL EXAMINER



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ABSTRACT

Electrical power plays a important role in people's daily activities. Power transformers are one of the most important pieces of equipment in a power system, and their operation reliability is directly related to the safety of the power system. Due to the advancement of technology Android technique is used in most real-time applications. Various sensors are used to collect real data from the environment or objects. With the help of the Android GUI (Graphical User Interface) APP concept, people can create a machine to machine connection. This proposed system was designed to monitor and detect the online parameters of the transformer sections and immediately sent the message to the authenticated person through wirelessly (non-contact). The important indicators used to measure the condition of the transformer are temperature, oil level, load current, voltage regulation as well as vibration due to load current switching. This system can reduce manpower and increases the stability, accuracy, and efficiency of the transformer. The systems also support the preventing of electrical loads through switch unit during the period of transformer malfunction. The sensor data transfer to the controller and check these values with standard reference. If the sensor values cross the threshold value the alert message transfer to the concerned people. All the sensor values are sent to the android phone through IEEE 802.11 wireless protocol.

Keywords: online transformer health prediction, wireless protocol etc.,



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CONCLUSION

This system provides schemes for ensuring that personnel performing energized electrical work, including oil temperature, vibration testing and diagnostics are trained in the safety aspects of such work and have been qualified by their supervisor to perform the task assigned. The system offered by transformer health safety associated with this program covers personal safety issues regarding work on electrical distribution systems and includes relative information to be gathered while analyzing electrical – related hazards.

The system is successfully completed for monitoring the transformer health by using through sensors, GUI-APP and BLUETOOTH device.