CHEBROLU ENGINEERING COLLEGE(HU)::CHEBROLU
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Program name	Program code	Name of the Course that include experiential learning through project work/field work/internship	Course code	Year of offering	Name of the student studied course on experiential learning through project work/field work/internship
ECE	B.Tech	SMART UV LIGHT TO PROTECT THE AGRICULTURE FROM INSECTS	ECE	2020-21	SHAIK MAHABBI
ECE	B.Tech		ECE	2020-21	KORLAKUNTA NAGAVENI
ECE	B.Tech		ECE	2020-21	EDAMAKANTI PRAVALLIKA
ECE	B.Tech	VEHICLE ACCIDENT AVOIDANCE WITH ROAD ADVERSE CONDITIONS MONITORING SYSTEM	ECE	2020-21	PAMIDIPATI NAVYASRI
ECE	B.Tech		ECE	2020-21	GUNTAKA BHAVANA SAI
ECE	B.Tech		ECE	2020-21	NAGISETTY JAYASRI
ECE	B.Tech		ECE	2020-21	YARRAM SATYA
ECE	B.Tech	Facial expression recognition using CNN	ECE	2020-21	KARUMURI BALA BHARATHI
ECE	B.Tech		ECE	2020-21	TURAKAPALLI JYOTHIRMAI
ECE	B.Tech		ECE	2020-21	KANDILOTH PARAMESWARI
ECE	B.Tech		ECE	2020-21	SURYADEVARA LAKSHMI
ECE	B.Tech	Autonomous dam shutter with water level data transmitter	ECE	2020-21	KOPPULA VASUNDHARA
ECE	B.Tech		ECE	2020-21	CHINNAPAREDDY LAVANYA
ECE	B.Tech		ECE	2020-21	PETA VENKATA
ECE	B.Tech		ECE	2020-21	SHAIK JASMINE
ECE	B.Tech	A Medical Image Fusion Method Based on Convolutional Neural Network	ECE	2020-21	EDDU VENKATA ARUNA
ECE	B.Tech		ECE	2020-21	MUNAGAPATI PRAVALLIKA
ECE	B.Tech		ECE	2020-21	ADUGULA NAGA PRASANNA
ECE	B.Tech		ECE	2020-21	TADIBOINA POOJITHA
ECE	B.Tech	Fake biometric detection using objective fedility measures	ECE	2020-21	PULLAKANAM VENKATA
ECE	B.Tech		ECE	2020-21	YELAM SAIPRASANNA
ECE	B.Tech		ECE	2020-21	SHAIK SHABEENA FARHEEN
ECE	B.Tech		ECE	2020-21	DEEKSHITHA CHEVURU
ECE	B.Tech		ECE	2020-21	YEDDU CHANDRIKA
ECE	B.Tech	IOT based smart health monitoring system using arduino	ECE	2020-21	SAYYED RAJIYA

ECE	B.Tech	IOT based smart health monitoring system using arduino	ECE	2020-21	KOLANU MOUNIKA
ECE	B.Tech		ECE	2020-21	JAYAVARAPU SAI LALITHA
ECE	B.Tech		ECE	2020-21	KATARI TULASI
ECE	B.Tech	Atmospheric water generator	ECE	2020-21	SUSMITHA MUPPALLA
ECE	B.Tech		ECE	2020-21	MUNNANGI BHAVYA SRUTHI
ECE	B.Tech		ECE	2020-21	GADDAM MOUNIKA SREE
ECE	B.Tech		ECE	2020-21	MARRI ROHITHA
ECE	B.Tech	Air pollution monitoring and Alerting system to prevent environment	ECE	2020-21	UPPALA DEEPIKA
ECE	B.Tech		ECE	2020-21	BELLAMKONDA GAYATHRI
ECE	B.Tech		ECE	2020-21	SHAIK HANIFA
ECE	B.Tech		ECE	2020-21	PELLETI PAVAN
ECE	B.Tech	Garbage dustbin management system and reporting over IOT	ECE	2020-21	ALLAMSETTY
ECE	B.Tech		ECE	2020-21	AREPALLI GOPALA KRISHNA
ECE	B.Tech		ECE	2020-21	VATTIKUTI GOPALA
ECE	B.Tech		ECE	2020-21	KUNCHALA SIVA RAMA
ECE	B.Tech	Automatic plant irrigation and soil moisture system	ECE	2020-21	BUDAMGUNTLA MALYADRI
ECE	B.Tech		ECE	2020-21	RUSUM VIJAY KIRAN
ECE	B.Tech		ECE	2020-21	SHAIK AKHEEL MUSHRAAF
ECE	B.Tech		ECE	2020-21	DAMARAVARAPU PRAVEEN
ECE	B.Tech	Automatic temperature controlled fan	ECE	2020-21	ANDI PAVAN KALYAN
ECE	B.Tech		ECE	2020-21	KOLANU VENKATA RAMU
ECE	B.Tech		ECE	2020-21	KOLLURI RAJESH
ECE	B.Tech		ECE	2020-21	KATAMGARI SIVARAM
ECE	B.Tech	GREENHOUSE MONITORING AND WEATHER REPORTING OVER IOT	ECE	2020-21	PONUGOTI NAGI REDDY
ECE	B.Tech		ECE	2020-21	MADDI BHANU SAI KUMAR
ECE	B.Tech		ECE	2020-21	MUHAMMAD ABDUL
ECE	B.Tech		ECE	2020-21	VISSAMSETTY GANESH
ECE	B.Tech	Wireless street light	ECE	2020-21	KOMATLA MAHESH REDDY
ECE	B.Tech		ECE	2020-21	MANNAM VAMSI KRISHNA
ECE	B.Tech		ECE	2020-21	SYED MEER ASHWAK
ECE	B.Tech		ECE	2020-21	VUTUKURI VENKATA NAGA
ECE	B.Tech	TSUNAMI WARNING SYSTEM	ECE	2020-21	RALI SHANMUKHA SRINIVAS
ECE	B.Tech		ECE	2020-21	GUDIPUDI SIDHARDHA

ECE	B.Tech		ECE	2020-21	SHAIK RAMEEZ BASHA
ECE	B.Tech		ECE	2020-21	SHAIK AKHIL BABU
ECE	B.Tech	Solar based smart home appliance	ECE	2020-21	MUSALAMADUGU
ECE	B.Tech		ECE	2020-21	GUNTURU VENKATA SAI
ECE	B.Tech		ECE	2020-21	SYED KHAMRUDDIN
ECE	B.Tech		ECE	2020-21	BATTULA SAI KUMAR
ECE	B.Tech	AUTOMATIC STREET LIGTH THAT IS POWERED THROUGH SPEED BREAKERS	ECE	2020-21	PATHAN RAHAMAN KHAN
ECE	B.Tech		ECE	2020-21	THROVAGUNTA RAKESH
ECE	B.Tech		ECE	2020-21	VUTUKURI NAGA SAI
ECE	B.Tech		ECE	2020-21	PALADUGU SRIVENKATA
ECE	B.Tech	Cell phone detector cum auto announcing system	ECE	2020-21	YETRA SRIMANNARAYANA
ECE	B.Tech		ECE	2020-21	MARUPUDI SUDHEER
ECE	B.Tech		ECE	2020-21	BOLLU NARENDRA KUMAR
ECE	B.Tech		ECE	2020-21	KASUKURTHY ANNA RAHUL
ECE	B.Tech	EFFICIENT POWER MANAGEMENT SYSTEM DESIGNED FOR STREET LIGHTS	ECE	2020-21	MANNE VASU BABU
ECE	B.Tech		ECE	2020-21	RAM TEJA MADDULURI
ECE	B.Tech		ECE	2020-21	SETTY MAHESH

A project report on

TSUNAMI WARNING SYSTEM

Submitted in partial fulfillment of the requirement for the award of the degree of

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IN

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ABSTRACT

The concept of tsunami warning system is used to detect tsunami in advance and issue warnings to prevent loss of life and damage. It can be made using important devices like a network of sensors, embedded system and communication system to issue timely alarms by which the system permits the people of costal areas to take immediate action. In general to locate the earthquake point under the see, hundreds of seismic stations are required to identify the see level height, these sensors are called as shore-based tide gauges those can be installed in the deep see or they can be installed at seashore to verify the existence of a tsunami. Other types of systems are also proposed by the experts by which duration and frequency content off wave energy is indicative of an earthquake's tsunami potential. Seismic alert systems or costal tide gauges are capable of detecting a centimeters difference in ocean height.

To prove the concept practically, the prototype module consists of a small tide gauge which can measure the height of tide or water wave level in three steps. The demo module consists of a tower type mechanism over which processing unit constructed with aurdino controller and RF transmitter will be accommodated. As said above, to sense the tide level at 3 different levels, three sensors are used and are attached to the tower at three different locations. These sensors are nothing but water sensors which are designed to activate by sensing the tides, these will not respond to rain water, accordingly these must be designed. The idea of using three sensors is to identify the water wave height in three steps i.e. low tide, medium tide, and dangerous tide. Depending up on the information gathered from the sensors, the controller is programmed to transmit the information through RF transmitter. The receiver that contains LCD interfaced with another microcontroller displays the information and raises the alarm automatically.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
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<u>CERTIFICATE</u>

This is to certify that the Main project entitled "TSUNAMI WARNING SYSTEM" is a bonafide work done by V.V.N.MANIKATA, R.SHANMUKHA SRINIVAS, G.SIDHARDHA, SK.RAMEEZ BASHA a partial fulfillment of the requirements for the award of degree of **BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING** during the academic year 2020-2021.

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A Project Report On

EFFICIENT POWER MANAGEMENT SYSTEM DESIGNED FOR STREET LIGHTS

Submitted in partial fulfillment of the requirement for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

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This is to certify that the Main project entitled **"EFFICIENT POWER MANAGEMENT SYSTEM DESIGNED FOR STREET LIGHTS"** is a bonafide work done by **K. ANNA AHUL, M. VASU BABU, M. RAM TEJA, S. MAHESH** a partial fulfillment of the requirements for the award of degree of **BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING** during the academic year 2020-2021.

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ABSTRACT

Every day lot of energy is wasted due to the continuous glowing street lights, sometimes they glow during day time also and therefore it is essential to adapt an autonomous auto control system to reduce the energy wastage. Here an intelligent street light concept is presented that adapts logic control circuit such that depends upon the moving traffic, these lights will be controlled automatically. Means, initially all street lights will be glow automatically during dark and these lights remain in dim light, condition when no activity is detected, but brightens when vehicle movement is detected. As the vehicle moves further, these lights will be glow at full brightness one after another in a sequence. This type of lighting is different from traditional or stationary illumination. In addition to minimize the power consumption further, an automatic switch on and switch off circuit is also added to the system such the lights will be energized automatically during dusk and the same lights will be de-energizedin the morning.

The demo module is constructed with 4 small street lights and each street lightis having a 2.5w high glow LED lamp. Supply to these lights is provided through relays interfaced with embedded system built with 89c51microcontroller chip. LDR is used as natural light sensor and it is wired with timer chip configured in trigger mode suchthat all lights will be energized during dark only. Moving traffic is detected through IR sensors, here 4 sets of sensors are used to control 4 street lights independently. In idle condition, street lights remain in dim condition, whenever any circuit detects approaching vehicle, corresponding street light will be glow brightly. In this configuration, as each street light is having independent control circuit and as the vehicle moves, street lights will be brightened one after another in a sequence. Sinceit is a prototype module, 4 street lights are simulated in demo module, but for real time applications, entire street lights must be controlled independently.

A Project Report On

EFFICIENT POWER MANAGEMENT SYSTEM DESIGNED FOR STREET LIGHTS

Submitted in partial fulfillment of the requirement for the award of the degree of

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A PROJECT REPORT ON

AIR POLLUTION MONITORING

CUM CONTROLLING DEVICE

Submitted in partial fulfillment of the requirement for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

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This is to certify that the Main project entitled "**AIR POLLUTION MONITORING CUM CONTROLLING**

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Abstract

The device designed here is intended to use in indoor applications and its purpose is to measure the air quality as per the AQI standards. If the air quality is poor, means the value is grater than 150 due to the smoke or any other toxic gasses present in the air, immediatelythe system energizes the fresh air pumping fan and at the same time exhaust fan also will be energized to pump out the polluted air. Air quality is measured with the air quality index (AQI) and it works like a thermometer that is intended to measure from 0 to 500 degrees.

However the AQI is a way of showing changes in the amount of pollution in the air. Air quality is a measure of how clean or polluted the air is. Air quality measurement is commonly reported in terms of micro grams per cubic meter usually denoted as parts per million (PPM). The amount of pollution in the air is usually measured by its concentration in air. The concentration of a pollutant in air may be defined in terms of the proportion of the total volume. MQ135 is used as air quality pollution sensor and its output in the form of variable DC voltage will be varied according to the air pollution. For example, if air pollution is more, more output will be generated from the sensor. Based on the voltage generated by the sensor, appropriate AQI is created and its value will be displayed through LCD. The analog data acquired from the sensor will converted in to digital using ADC and this digital data is fed to the embedded system. With the help of an LCD interfaced with embedded system, polluted air level will be displayed. As per the AQI standards, if the pollution level is grater than 150, it is treated as unhealthy air such that the system pumps out the dirty air and pumps in the fresh air.

A project report on

AUTOMATIC PLANT IRRIGATION SYSTEM BASED ON SOIL MOISTURE AND MONITORING

Submitted in partial fulfillment of the requirement for the award of the degree of

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IN

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This is to certify that the Main project entitled "AUTOMATIC PLANT IRRIGATION SYSTEM BASED ON SOIL MOISTURE AND MONITORING" is a bonafide work done by KUNCHALA SIVA RAMA KRISHNA REDDY, BUDAMGUNTLA MALYADRI, RUSUM VIJAY KIRAN, SHAIK AKHEEL MUSHRAAF a partial fulfillment of the requirements for the award of degree of BACHELOR OF TECHNOLOGY IN ELECTRONICS &COMMUNICATION ENGINEERING during the academic year 2020-2021.

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ABSTRACT

Irrigation is the art of applying water to the plants/ fields to grow and to increase the quantity as well as quality of the fruits, food grains etc., Automatic irrigation system is a modern method of irrigating the vegetable, fruit fields, farms, gardens and land scraping areas as against the conventional method, which uses large number of men-hours and uncontrolled water quantity. This modern irrigation method using solenoid valves has the advantage of precisely applying water for irrigation in both location and point, thus offering the potential of increased profit due to reduced water.

This project work is aimed to deliver water to the thirsty plants automatically and in addition water level in the tank will be monitored. Soil condition near the plant is monitored continuously and if it is dry, Solenoid valve will be activated and water will be delivered for specific time until the soil becomes wet near the sensor. Water level in the water tank is also monitored, and if the level is low, alarm will be energized. To monitor the water level, LCD used and it is interfaced with controller which displays the water level in three steps I.e., full, mid level and low. Depending up on the water level, corresponding text message will be displayed. The demo module will be constructed using one solenoid valve, but for practical usage any number of valves can be used. Water tank will be simulated using small water tub and the solenoid valve will be attached to this water tub which will be activated and deactivated automatically according to the soil condition. With the help of a plastic tray filled with the loose soil, wet and dry conditions can be simulated. All devices including water tank and soil tray will be housed in a mechanical structure to build as single unit.

A project report on

SOLAR POWERED SMART HOME APPLIANCES

Submitted in partial fulfillment of the requirement for the award of the degree of

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IN

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This is to certify that the Main project entitled "SOLAR POWERED SMART HOME APPLIANCES" is a bonafide work done **SK.AKHIL, M.VEERANJINEYULU, G.VENKATA SAI, SD.KHAMURDDIN** a partial fulfillment of the requireme nts for the award of degree **of**

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ABSTRACT

These days smart homes are fetching lot of popularity becaus of many latest features are adopted, in this regard people are concentrating about smart home appliances and looking for them, there by this project work is selected in which ethree important appliances are selected and are automated.

The main aspect of the system is to utilize solar energy to run the devices automatically. First importance is given for automatic exhaust fan for the Kitchen, in this with the help of universal gas sensor, all sorts of toxic gases including smoke will be detected by which fan will be energized automatically. The second device is to control the outdoor lights automatically, in this device LDR is used for sensing the nature light by which outdoor lights will be energized automatically in the evening and they will be switched off in the morning. The last but most important device is automatic door bell, in this concept sensors arranged at the main entrance of the home, detects the person and activates the door bell automatically, this device can be used for security purpose also.

Since it is a prototype module, the solar panel & battery used here is not sufficient run the appliances continuously, to run the devices continuously higher rating panels and batteries are essential. The prototype module contains all required devices including 6W panel & 2AH battery, which makes the system as real working. The solar panel used in the project work can deliver a maximum current of 0.5amp under the bright Sun & this energy is used for charge the battery. The concept is to utilize free energy source of solar energy to drive domestic appliances by which consumption of conventional energy can be reduced considerably and lot of revenue can be saved.

A PROJECT REPORT ON

AUTOMATIC WIRELESS STREET LIGHT

Submitted in partial fulfillment of the requirement for the award of the degree of

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a Bonafide work done by V.GANESH, V.R, K.MAHESH REDDY, N.VAMSI KRISHNA, S. MEER

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Abstract

In High-Tech cities, we won't find over head power cables running over the electric poles, especially in advanced countries all power cables will be laid under the ground, all roads looks to be clean and green. To create such beautiful environment, all street lights should have a cable less lighting system to enhance the city beauty further. In this regard here this system is presented in which electric energy will be transmitted from the cable to the street light through a device called wireless power transmitter. To enhance the technology further, the street light is automated such that it will be energized in the evening and de-energized in the morning automatically.

For demo purpose a model of street light will be constructed that is equipped with mini street light designed with few high-glow LED's. With the help of a self oscillator circuit designed with power Mosfets, power transmitting coil will be energized at a high frequency of 40 KHz approximately by which electric energy will be transmitted. The power receiving coil arranged at some height and attached to the pole, energy will be received which in turn street will be energized. In real time applications, this power transmitting coil along with its circuit can be put under the ground and where as the power receiving coil can be arranged to the pole in a decorative manner. But since it is a prototype module every thing will be exposed for demonstration purpose. To make the light as automatic, natural light sensing device is used and it is wired with timer chip which is configured as monostable mode of operation. In this mode the chip will be triggered at dusk lighting and street will be energized, similarly in the morning, by sensing the natural light, the street light will be switched off automatically.

A project report on

AUTOMATIC TEMPERATURE CONTROLLED FAN
Submitted in partial fulfillment of the requirement for the award of the degree of

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This is to certify that the Main project entitled "AUTOMATIC TEMPERATURE CONTROLLED FAN" is a Bonafede work done by D.PRAVEEN KUMAR, A.PAVAN KALYAN, K.VENKATA RAMU, K. RAJESH a partial fulfillment of the requirements for the award of degree of **BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING** during the academic year 2020-2021.

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ABSTRACT

Now a day, automatic control systems are used widely to minimize the human errors and increase the production rate with good quality. So, most of the machines used in production stream uses induction motors with variable speeds. Using analog methods we can vary the speed, but they are not accurate because of the tolerance of the devices, and also the circuit is complex.

For power equipment's blower equipment's are must to remove heat in the chamber. But irrespective of heat, the maximum power is applied. And also, in homes we use fans for air circulation. But all the time we don't vary speed according to temperature. Particularly in the early night and early morning

So, by using micro controller we control the speed of an AC motor using TRIAC according to the temperature. By applying a PWM pulse to gate of the TRIAC, the speed of the motor varies. In this system, a micro controller is interfaced with a temperature sensor through ADC, TRIAC and LCD display. Micro controller reads the temperature through ADC and varies the duty cycle of the PWM according to the temperature. The controller interfaced with display to show temperature. A look up table is generated to change the pulse width to achieve different speeds in the assembly program.

A Project report on

GREENHOUSE MONITORING AND WEATHER REPORTING OVER IOT

Submitted in partial fulfilment of the requirement for the award of degree of

BATCHELOR OF TECHNOLOGY

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

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GREEN HOUSE MONITORING SYSTEM USING IOT

ABSTRACT :

In this project work, prime importance is given for monitoring the Green house monitoring system using IOT Abstract Growing plants is both an art and a science. About 95% of plants or crops are grown in open field. Since time immemorial, man has learnt how to grow plants under natural environmental conditions. In some of the temperate regions where the climatic conditions are extremely adverse and no crops can be grown, man has developed methods of growing some high value crop continuously by providing protection from the excessive cold, which is called as Greenhouse Technology. So, Greenhouse Technology is the technique of providing favorable environment condition to the plants. It is rather used to protect the plants from the adverse climatic conditions such as wind, cold, rainfall, excessive radiation, extreme temperature, insects and diseases. It is also of vital importance to create an ideal micro climate around the plants. This is possible by erecting a greenhouse / glass house, where the environmental conditions are so modified that one can grow any plant in any place at any time by providing suitable environmental conditions with minimum labor. In this regard, maintaining green house parameters & controlling them according to the crop is very important.

parameters values, for this purpose 4 important parameters are monitored, they are 1) Humidity level, 2) measurement of green house temperature, 3) measurement of light intensity or solar radiation, and 4) measurement of soil moisture. These are the four parameters monitored continuously and displayed through an LCD interfaced with Arduino processor. Since controlling is not possible in demo module, only monitoring part is considered. With the help of ESP8266 Wi-Fi module interfaced with Arduino, information will be transmitted to the concern person through internet.

A project report on

AUTONOMOUS DAM SHUTTER WITH WATER LEVEL

DATA TRANSMITTER

Submitted in partial fulfillment of the requirement for the award of the degree of

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This is to certify that the Main project entitled "AUTONOMOUS DAM SHUTTER WITH WATER LEVEL DATA TRANSMITTER" is a bonafide work done by K. VASUNDHARA DEVI, CH. LAVANYA, P.VENKATADURGAMBIKA, SK. JASMINE a partial fulfillment of the requirements for the award of degree of *BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION* ENGINEERING during the academic year 2020-2021.

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ABSTRACT

A dam is a barrier that impounds water and will not allow the water to escape from the reservoir until it is filled. A barrage is a type of low-head, diversion dam which consists of a number of large gates that can be opened or closed to control the amount of water passing through the structure, and thus regulate and stabilize river water elevation upstream for use in irrigation and other systems. The gates are set between flanking piers which are responsible for supporting the water load of the pool created. Such dam gates or shutters are controlled manually and depending up on the water level in the reservoir these gates will be opened to avoid floods. During heavy rain, continuous vigilance over the reservoir is essential, if proper action is not taken in in- time, it leads to severe damage to the surrounding villages due to the floods. In this regard to avoid manual operation, gates can be automated efficiently and there by this project work is considered and one prototype module will be constructed for live demo in which in addition to the construction of automated gate water level data will be transmitted to the concern department.

The dam (an embankment to restrain water) shutter designed here is aimed to control automatically according to the water level. If the water level reaches to the above normal, half of the shutter will be lifted automatically. Similarly if the water level reaches to the danger level, complete shutter will be lifted. In addition water level in three steps i.e. Low, Normal and high (Danger level) information will be transmitted to the nearest monitoring station through RF network. The demo module is constructed with a mini water tub and water level is monitored through electrodes. The shutter moving mechanism designed with DC motor is interfaced with embedded system.

Depending up on the water level will be controlled automatically. RF modules are used to transmit the water level data, in the receiving unit with the help of a LCD water level can be monitored, in addition if the water level is high an alarm interfaced with processing unit designed with 89C2051 controller will be energized automatically.

A PROJECT REPORT ON

IOT BASED SMART HEALTH MONITORING SYSTEM USING ARDUINO

Submitted in partial fulfillment of the requirement for the award of the degree of

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Abstract

An important part of our life, internet has enabled many machines and Devices we use in everyday life to be monitored and controlled remotely through Internet of Things (IOT) technology. Smart health applications have become a rapidly growing sector. For individuals with heart disease, the Heart Rate (HR), Body Temperature (BT) and Respiration rate (RR) values are considered as vital signs that must be measured regularly. In this study WiFi based application is developed that can monitor HR, BT and RR parameters for heart & lung patients who should be under constant observation.

The measuring system, which consists of Pulse, temperature and Respiration sensors measures patient signs of biomedical parameters continuously. Measurement of respiration rate is very important parameter to be monitored for lung infected patients. For measuring RR, here Hall Effect sensor is used and it is a kind of magnetic sensor which will be activated automatically when it detects magnetic field. So, this sensor & permanent magnet attached to an elastic belt will be expanded and compressed according to breathing action. Since it is a prototype module, basic concept will be proven practically by using a small elastic belt. With the help of LCD interfaced with main processor designed with Arduino Uno MCU, all 3 parameter values are displayed. Since RR & HR values are time based, here start button is used to measure the values

for one minute 60 seconds, when the start button is activated these values will be counted in increment mode and will be clutched after 60Seconds, and information will be passed to the smart phone through WiFi module. If the HR or BR is more than the specified, alarm will be energized automatically. The system designed here can be used in hospitals and individual houses such that concern doctor can monitor the patient condition continuously wherever he she is. The pulse sensor also known as heart beat sensor used here is designed to give digital output of heart beat when it is clipped over a finger tip. It works on the principle of light modulation by blood flow through finger at each pulse. LM35 is used as atemperature sensor which delivers the data in degree centigrade.

A project report on

AUTOMATIC STREET LIGHT THAT IS POWERED THROUGH

SPEED BREAKERS

Submitted in partial fulfillment of the requirement for the award of the degree of

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This is to certify that the Main project entitled "AUTOMATIC STREET LIGHT THAT IS POWERED THROUGH SPEED BREAKERS" is a bonafide work done by B.SAI KUMAR,V.NAGA SAI LOHITH,T.RAKESH,P.REHAMAN KHAN a partial fulfillment of the requirements for the award of degree of BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING during the academic year 2020-2021.

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ABSTRACT

It is very significant to design pollution free energy generation system. Speed breaker Power Generator (SBPG) is the most emerging technique which produces electrical power with minimum input. In this system, a rack and pinions mechanism is used for the production of electricity. When a car reaches on the speed breaker, the rack moves downward to generate linear to rotary motion using

pinions. The rotary motion is transferred to DC generator which generates DC power which is stored in batteries same as in solar technology. The generated power can be used for the domestic purpose or commercially, which are present near the speed breaker. This examined that SBPG is generating 273.24W on single push under the application of 400kg. In an hour, passing 100 cars of 400kg can generate 54.59 kWh. This mechanism utilizes both downward as well as the upward motion of the rack.

The project is about the design and manufacturing of speed breaker power generator. In this project we are trying to utilize one such source. Electricity is generated by replacing the traditional speed breakers with some simple mechanism. As vehicles pass over the speed breakers, the speed breaker itself goes down due to weight of the vehicle which results in displacement of a rack gear which rotates the pinion connected to shaft of the generator which in turn produces electricity.

This method is an effective way to produce electricity as the numbers of vehicles on the road are ever increasing. Also, the cost of fabrication of the model is low. It can be effectively placed near traffic lights, at the entrance of parking lots and any other place where the traffic density is high. As vehicle passes over it, it starts moving. This method provides an efficient way to generate electricity from the kinetic energy of moving vehicles in roads, highways, parking lots etc...

In this report we explain in detail the various stages of research, design and manufacturing which was involved in the construction of various components such as springs, generator, rack and pinion mechanism. Most of the parts are assembled by the students themselves. It also mentions the reason behind using the specific materials and methods of construction for effective working of the system.

A project report on

OPPOSITE VEHICLE IDENTIFYING DEVICE FOR GHAT ROAD

Submitted in partial fulfillment of the requirement for the award of the degree of

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IN

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A PROJECT REPORT ON

CELL PHONE DETECTOR CUM AUTO ANNOUNCING SYSTEM

Submitted in partial fulfillment of the requirement for the award of the degree of

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This is to certify that the Main project entitled "CELL PHONE DETECTOR CUM AUTO ANNOUNCING SYSTEM " is a Bonafede work done by PALADUGU SRIVENKATA SIVA NAGA PAVAN KUMAR , YETRA SRIMANNARAYANA REDDY, MARUPUDI SUDHEER , BOLLU NARENDRA KUMAR a partial fulfillment of the requirements for the award of degree of **BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING** during the academic year 2017-2021.

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ABSTRACT

The device designed here is very useful for many departments where using cell phones are strictly restricted. The system developed here can sense the presence of an activated cell phone which prevents use of mobile phones in examination halls, confidential rooms, etc. Especially in prisons, using cell phones are strictly restricted; the illegal use of cell phones is a growing and dangerous problem jails and hence with little modifications, this device can be installed in jail rooms to catch illegal cell phone users. These devices are quite helpful for the jailor to restrict the use of cell phones in jail. In this project work it is aimed to restrict the use of cell phones in confidential rooms. The main important feature added to the system is that it can announce automatically when it detects any activated cell phone nearby this device. The demo module constructed here is having sensing circuit which can detect high frequency RF signals present in the air usually surrounded by the cell phone. Output of this circuit is fed to PIC controller chip for activating voice channel. When the phone is activated, signal strength will be more when compared with idle mode, means the system can only detect activated phone. System will be activated automatically by sensing incoming calls, outgoing calls and SMS activities. Whenever any mobile phone is activated, it radiates RF signal and depending up on the radiating power (differs from phone to phone), the signal will be radiated in to the space to a distance of 6 inches to 20 inches. Whenever the system detects activated phone, output of the sensing circuit activates the voice chip through PIC16F676 microcontroller chip by which corresponding pre-recorded voice channel will be activated automatically and hence "Switch off the cell phone immediately" will be announced automatically through speaker .

A project report on

FAKE BIOMETRIC DETECTION USING OBJECTIVE FIDELITY MEASURES

Submitted in partial fulfillment of the requirement for the award of the degree of

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ABSTRACT

In the recent era where technology plays a prominent role, persons can be Indentified (for security reasons) based on their behavioral and physiological characteristics (for example iris, fingerprint, face etc.)

To ensure the security of biometric system, needs to develop a novel method which reduce the vulnerability. Here we proposed a novel software based method based on livenesss detection system to detect the real and fake samples by using Image Quality Assessment (IQA).

For experimental, real and dummy database of finger print, iris and face has been taken. From one image, 14 image quality measures has been determined which helps in distinguishing the real and fake samples.

CERTIFICATE

This is to certify that the Main project entitled "SMART SOLAR UV LIGHT TO PROTECT THE AGRICULTURE FARMS FROM INSECTS" is a bonafide work done by SHAIK MAHABBI, KORLAKUNTA NAGAVENI, EDAMAKANTI PRAVALLIKA, a partial fulfillment of the requirements for the award of degree of **BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING** during the academic year 2017-2021.

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ABSTRACT

The Ultraviolet light (group of blue LEDs') used in the system can generate electromagnetic energy in the form of light which can be radiate in to the space up to certain distance. In general, when compared with normal light, UV light can reach long distance. One main advantage of using this light is that it can attract certain flying insects familiarly present in the agricultural fields. In addition, another bunch of white high glow LED's are also added along with blue LED's such that other types flying insects will be attracted towards white light. These two LED bunches of LEDs' will glow one after another in a sequence. The program for the controller is prepared such that, both color group of LEDs' will glow one after another for 5 minutes each. As this multi-colored light is to be arranged over a poll at certain height in the form, flying insects will be attracted towards the light. The mechanism contains cone type funnel mechanism arranged just below the light, by which insects will be dropped through the cone in to a bag attached to the funnel at its bottom side.

The insect trap mechanism designed here is powered through solar energy and the panel arranged over the top of metal pole can generate a maximum power of one-amp current under the bright Sun. The energy stored in to the battery will be utilized during the knights. Battery rating must be defined such that, though the solar energy is not available for 1 to 2 days, stored energy should able to run the system for three days. In this regard, here higher rating maintenance free type of rechargeable battery is used for long back-up time. Device ratings, back-up time, energy calculations, etc. are described in detail in the project report.

As the system is fully automated human involvement is not required, device will be energized and de-energized automatically when required. With the help of a panel output monitoring circuit and by sensing the dusk condition, light will be energized and it remains in on condition until the morning.

A project report on

FACIAL EXPRESSION RECOGNITION USING CONVOLUTIONAL NEURAL NETWORKS

Submitted in partial fulfillment of the requirement for the award of the degree of

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Abstract

A Facial expression is the visible manifestation of the affective state, cognitive activity, intention, personality and psychopathology of a person and plays a communicative role in interpersonal relations. Automatic recognition of facial expressions can be an important component of natural human-machine interfaces; it may also be used in behavioral science and in clinical practice. An automatic Facial Expression Recognition system needs to perform detection and location of faces in a cluttered scene, facial feature extraction, and facial expression classification.

Facial expression recognition system is implemented using Convolution Neural Network (CNN). CNN model of the project is based on LeNet Architecture. Kaggle facial expression dataset with seven facial expression labels as happy, sad, surprise, fear, anger, disgust, and neutral is used in this project. The system achieved 56.77 % accuracy and 0.57 precision on testing dataset.

Keywords: Facial Expression Recognition, Convolutional Neural Network, Deep Learning, Theano

A project report on

MULTIMODAL MEDICAL IMAGE FUSION BASED ON CONVOLUTION NEURAL NETWORK

Submitted in partial fulfillment of the requirement for the award of the degree of

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ABSTRACT

Medical image fusion technique plays an an increasingly critical role in many clinical applications by deriving the complementary information from medical images with different modalities. In this paper, a medical image fusion method based on convolutional neural networks (CNNs) is proposed. In our method, a Siamese convolutional network is adopted to generate a weight map which integrates the pixel activity information from two source images. The fusion process is conducted in a multistate manner via image pyramids to be more consistent with human visual perception. In addition, a local similarity based strategy is applied to adaptively adjust the fusion mode for the decomposed coefficients. Experimental results demonstrate that the proposed method can achieve promising results in terms of both visual quality and objective assessment.

With the rapid development of sensor and computer technology, medical imaging has emerged as an irreplaceable component in various clinical applications including diagnosis, treatment planning and surgical navigation. To provide medical practitioners sufficient information for clinical purposes, medical images obtained with multiple modalities are usually required, such as X-ray, computed tomography (CT), magnetic resonance (MR), positron emission tomography (PET), single photon emission computed tomography (SPECT), etc. Due to the difference in imaging mechanism, medical images with different modalities focus on different categories of organ/tissue information. For instance, the CT images are commonly used for the precise localization of dense structures like bones and implants, the MR images can provide excellent soft-tissue details with high-resolution anatomical information, while the functional information on blood flow and metabolic changes can be offered by PET and SPECT images but with low spatial resolution. Multi-modal medical image fusion aims at combining the complementary information contained in different source images by generating a composite image for visualization, which can help physicians make easier and better decisions for various purposes

A project report on

GARBAGE DUSTBIN MANAGEMENT SYSTEM USING IOT

Submitted in partial fulfillment of the requirement for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

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ABSTRACT

Waste management is one of the primary problems facing by all most all citizens in our major cities. The key issue is that the garbagebin placed at public places gets overflowed when it is not collected in time. The waste collecting trucks are supposed to visit each & every public dustbin to empty it. But unfortunately due to the poor management, filled bins are leftover for so long time which creates dirty smell and nuisance by which nearby people are the main victims. To avoid such nuisance environment, here this project work is designed which is intended to send information about the dust bin to the concern authority through IOT network. The informationcontains about thequantityof thegarbage present inthe bin.

To find out the garbage level in the dust bin IR sensorsare used, here 2 sets of sensors are used to detect 2 different levels of 75% and full. Each IR sensing circuit is constructed with 567 IC, this is a tone decoder chip generates highsignal when the sensors are interrupted by the garbage. Outputs of all the sensors are fed to the Arduino processor. This processor is programmed to acquireinformationfrombin I.e. garbagelevelinformation. Meanswheneverthe bin is filled with 75% of the garbage, sensorswill be interruptedand information will be passed to the processor. Based on this information, the processing unit forwards the information through Wi-Fi module to the concern authority. The system is intended to passthe information to theconcernmobile phone through internet.LCD is usedtodisplaythegarbagelevelandthesame willbetransmitted.

A project report on

ATMOSPHERIC WATER GENERATOR

Submitted in partial fulfillment of the requirement for the award of the degree of

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IN

ELECTRONICS AND COMMUNICATION ENGINEERING

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2017-2021

CERTIFICATE

This is to certify that the Main project entitled "ATMOSPHERIC WATER GENERATOR" is a bonafide work done by K.TULASI, M.SUSMITHA, M.BHAVYA SRUTHI, G.MOUNIKA SREE DEEPTHI a partial fulfillment of the requirements for the award of Degree of **BACHELOR OF TECHNOLOGY IN ELECTRONICS & COMMUNICATION ENGINEERING** during the academic year 2020-2021.

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ABSTRACT

An Atmospheric Water Generator (AWG) is a device that extracts water from humid Ambient air, i.e. atmosphere, the method employed here is aimed to condense water vapor present inthe air by cooling it through Thermo-Electric-Cooler (TEC) devices.

These devices popularly known as Peltier coolers also known as thermo electric coolers operate by the Peltier effect. Means, the device has two sides, and when a DC electric current flows through the device, it brings heat from one side to the other, so that one side gets cooler while the other gets hotter. The hot side is attached to a heat sink so that it remains at ambient temperature and the cool side goes below room temperature by which water particles present in the air will be accumulated over the cold body of TEC device and converted in to water slowly.

The device designed here is very useful where availability of pure drinking water is difficult, for ex; in see shores and deserts. Especially in areas like seashores, it is impossible to get drinking water, and where as the atmosphere contains pure water vapor. So the advantage of AWG, when it is constructed in huge size using huge quantity of large TEC modules and installed across the see shores of our country, drinking water problem can be solved considerably.

In general, solar energy converted in to electrical energy through PV (Photo Voltaic) modules are recommended to energize Peltier coolers, but keeping in view of cost and volume of the panels, here in this demo module, DC power source is used for demo purpose.

The demo module is constructed with 2 TEC modules, these devices acts as a Heat pump by which heat will be transferred from colder body to hot body, in this process the colder side body temperature falls lesser than ambient temperature. In general, in nature, if any solid body is kept in open air whose temperature is less than open air temperature, than the water particles present in the atmosphere will be attracted towards the cold body, and therefore, here by creating temperature differences over the bodies of TEC modules, water can be grasped from humid ambient air. Water vapor in the air can be extracted by condensation (cooling the air below its due point). Since it is a prototype module basic concept of cooling effect will be proven practically with 2 TEC devices, such that chilled moisture will be formed over the cold bodies of TEC modules and converted as water droplets. As each TEC device consumes more than 2.5 amps current, here high power dc source of 5amps is essential to energize both TEG modules. Hot body attached with large heat sink mechanism can be cooled with fans and here two small fans are used to cool entire heat sink mechanism. For this purpose, 12V DC Instrument cooling fans are used.