



PROBLEM STATEMENTS

(Department of Master of Computer Applications)

1. Flood Prediction

Design an efficient system, which can predict the certainty of flood and can alert the individual so that loss of life and property can be reduced by implementing an early flood detection mechanism. The objective of this IOT based project is to monitor the flood situation at the earliest and send notification in case of danger on the webpage. The notification sent can be read globally through IOT. An ultrasonic sensor is connected to the microcontroller that measures the level of water in rivers or dams and send that information to the microcontroller. The GPRS will send that notification through the internet on the webpage using IOT network.

2. Smart Ventilation System

This project reads the indoor temperature and outdoor temperature and if indoor temperature is higher than outdoor then ventilation fans will be automatically start. It helps to save electricity as fans will be start only when needed.

3. Solar Power Bank

We all use phone and its necessary part is battery. Design a power bank which will be charged by using solar energy that helps to reduce use of electricity and then phone can be charge by using that power bank.

4. Women Security Device

The purpose of this project is to make a smart electronic device which can be either kept in a pocket purse or can be wear by women. It can be active from phone or small key. This will be helpful when a women feel unsafe. Once the device is active it will send notification to her parents as well as to the nearby police station. Device can have a loud alarm system that will be active after sending notification so that nearby people can help the person.

5. Cycle Renting System

Design a system(website or an app) in which one can take cycle on rent. This system should be flexible like cycles will be made available in a closely spaced network of automated stations. Users can check out cycles at one station and return them to any other station. There should be a unique login password or can be a card system for renting of cycles.

6. Personal Assistance

In this busy life where we have to do lots of work we generally forget some important things. These important things include sending some important mails or to make call. Develop a mobile application that can be instructed from voice to send mail to XYZ with XYZ messages. This application must have access to google mail service. Some additional task can also be maintain by app like preparing a work note automatically by learning from the previous activities of user.

7. Alcohol Detector With Auto Ignition

Design a device which can be install in a four wheeler vehicle which detects whether a person is drunk or not. If a person is drunk then the vehicle will not start .If the engine is already start then after detecting it will automatically switch off. At the same time it should send message to a particular relative to inform this. Use simple Raspberry pi device to automatically control vehicle engine .

8. Path Finder

The purpose of this project is to help visually impaired person to identify nearest ATM, Bus Station, Hotels etc. Develop an android application that can understand human language and can take input as person's voice and application must suggest the exact route for particular requested place. Application must have access to google map (Google Map- API) and it must have its own speech system so that person can ask about route at any time and app must reply.

9. Currency Recogniser

Develop an android application that can help visually impaired person to identify currency. This application must have an image recognition facility. When person turn on, it must ask what you want to do .As person says to identify currency notes in front of camera, app must take image of currency and tell the denomination using voice system.

10. Number Plate Recognition

With the increase in population number of vehicles has also increased on roads .And it is like daily routine that someone break the traffic rules. Sometimes they get charged but sometimes they do not. Design a system which can recognise the number plate of vehicles who do not follow traffic rules and an e-challan will be sent to that person automatically. This will help to maintain traffic rules. Also the information from the number plate can be use at various areas like toll plaza, parking area, highly security area , border areas.

11. ATM Using Fingerprint

In this system fingerprint of user should be used as authentication instead of ATM card. Fingerprint will be used to do any kind of transactions.