**Design of an Intelligent Autonomous Accident Prevention Detection and Vehicle Monitoring System**

**Summary**

In This project they will prevent the accident and notify the emergency services and the owner of the vehicles. The system has three parts. First one is accident prevention part, second one is accident detection and rescuing part and the last one is black-box part.

**Prevention part**

If any obstacle in front of the vehicle or cross the danger line it will give the notification to the driver and other side driver can see the engine performance smoke level and compress natural gas. If there any leakage from the vehicle system will immediately send notification to the driver .

**Accident detection and rescuing part**

When any accident is occurs system will detect it and send the exact GPS location of accident spot to emergency services.

**Black-box part**

This part will save the every moment of the vehicle location , speed , time and date in the memory card

In this project they have used Ultrasonic sensor , GAS sensor Buzzer , Arduino , Display , GSM Module ,GPS module , memory card module , Accelerometer sensor, and micro-controller Arduino uno that has been programmed with c++ software. It is connected with the vehicle battery. The sensors send to the arduino send a single to alerting system buzzer,display,memory card module and GSM model.

Ultrasonic Sensor detect the obstacle in front of the vehicle and send it to the display, alerting the device by arduino.Gas sensors detects engine performance, smoke, carbon monoxide, leakage of compressed natural gas and send it to display. Accelerometer are sensing device that measure a moving object’s acceleration and can detect frequency and intensity of human movement. Global Positioning System (GPS) is a satellite-based navigation system that analyzes your location,velocity and time synchronization GPS helps you get where you are going from point A to point B .GPS module detect exact location and send it to arduino Arduino send signal to GSM module to send GPS location to instructed emergency numbers.In black-box GPS module sends real time GPS location with date, time to arduino and arduino sends signal to memory card module to save these data

|  |  |
| --- | --- |
|  |  |