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## Safe Driving Using Sensor

*Sanjana Sunil Fase, Maithilee Sachin Kadam, Samrudhi Vinod Kavathekar, Chinmayee Rajesh Kumtole, Ms. P. T. Desai*

Sharad Institute of Technology, Polytechnic, Yadrav.

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### ABSTRACT

In whole over world road calamity are occurred due to alcohol drunk and drive main point of our paper is to prevent road calamity we are using alcohol detection sensor eye blink detector and ultrasonic detector the alcohol sensors are used to catch driver is drunk or not the eye blink sensor is used for check the driver is sleepy or not with eye movements of operator if the vehicle owner is sleepy then it will trigger the alarm to awake the driver the ultrasonic sensor is used to detect obstacles it measures the area and detects a obstacle in given length if any obstacle is present then it certainly controls its velocity after coming near to that obstacle it will certainly stop the car in this process if the driver is drunk then the message or sms will send to relatives driver and also local police for prevent accident

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### INTRODUCTION

everyday road accident are happening over the world according to statistics 20-40 percentage of drunk and drive if the driver drunk means he/she will be comatose they will not be able to control themselves in this situation if they drive the car it can affect them and other too some of the drivers will be over speed after they drunk there are different modules to prevent these kind of road accidents in this paper we are using alcohol detection sensor eye blink sensor and ultrasonic sensors the alcohol detection sensor is fixed in steering of the car so that it can detect that driver consumed alcohol or not if the driver consumes the alcohol then car will not start itself if the driver is drunk then the sms or message will send to hisher relatives and also to local police to prevent the accident the eye blink sensor is also used in steering wheel of the car it will check the eye movements of the driver means they are sleepy or not the ultrasonic sensor is used to check the obstacles while driving the car

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### LITERATURE SURVEY

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### PROBLEM STATEMENT

Problem statement despite the notable advances in automotive technology calamity happens by driver error remains a most concern as stated to the racial highway traffic security administration nhtsa 90 of calamity are happened by human fault with usual factors including diverted driving speeding impaired steering many of these calamities occurs due to lack of visibility awareness of obstacles on route especially in adverse weather conditions or low-light environment

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### PURPOSED SYSTEM

The major cause of road accident is happening because of drunk and drive to overcome these problems we go for this efficient method in this process we are using different types of modules based on sensors we are also using eye blink sensor alcohol detection sensor and ultrasonic sensor all of these sensors are connected to the mobile to send sms or message to drivers relative and local police the alcohol detection sensor is fixed in steering of the car so that

it can detect that driver consumed alcohol or not if the driver consumes the alcohol then car will not start itself if the driver is drunk then the sms or message will send to hisher relatives and also to local police to prevent the accident the eye blink sensor is also used in steering wheel of the car it will check the eye movements of the driver means they are sleepy or not the ultrasonic sensor is used to check the obstacles while driving the car

## SYSTEM DESIGN

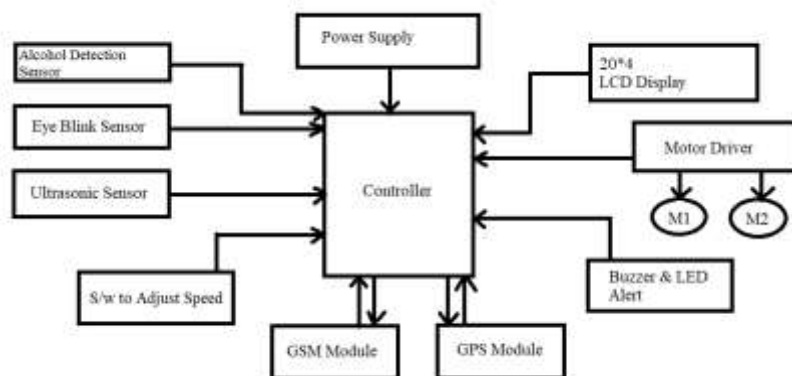


Fig1. System Design

1arduino uno- arduino uno is the controller of the system it is open-source mc board based on the atmega328p mc and built by arduinocc the board has 14 optical pins and 6 analog pins all of this would assist the microcontroller by attaching this board to the computer for further operation this boards strom supply may be made using ac to dc converter a usb cable otherwise a plug fig2 depicts arduino uno with usb cable

2alcohol sensor- it is developed using the mq3 alcohol sensor this is cheaper semiconductor indicator which could sense does of alcohol concentration from 005 mg/l to 10 mg/l when the concentration of alcohol gases decreases its conductivity decreases fig3 depicts alcohol sensor this is extremely prone to alcohol and has excellent tolerance to smoke fog and fuel disturbances this module provides optical as well as analog outputs just like your regular breathalyzer this sensor is alcohol ideal for detecting concentration of alcohol at your breath

3eye blink sensor- using a phototransistor and differentiator circuit the eye-blink sensor illuminates the eye and eyelid region with infrared light and then detects changes in the reflected light the exact functionality is heavily dependant upon the orientation and aiming of the emitter and detector towards the eye this research includes measuring and monitoring the eye blink with the aid of an ir sensor the eye is closed indicates the ir receiver output is high otherwise the output from the ir receiver is low

4buzzer- the piezoelectric sound modules introduced here are in operating on an revolutionary concept using natural piezoelectric ceramic oscillation these buzzers are available in lightweight portable sizes ranging from the smallest 12mm diameter to massive electric sounders from piezo the one show in below fig5 is a simple buzzer that when powered makes a continuous beep to warn the owner when he begins to feel sleepy when the sensor senses drink buzzer will be combined with the eye-blink detector and alcohol sensor

5led- the led is a source of semiconductor light the led is a different diode form and has specific pn junction diode electrical characteristics thus led allows the current to travel in the forward direction and blocks current going the other way the led occupies smaller than 1 mm in the field the leds technologies used to render various electrical and computer ventures

6dc motor- a dc machine is an electrical machine which converts in mechanical energy to electrical energy the first widely used type of motor was the dc motor as they may be operated by current direct current distribution systems the speed of a dc motor can be adjusted on a broad spectrum either by using a supply ignition variable modify the current force windings within field

7ultrasonic sensor- ultrasonic sensor is a tool which calculates interval into thing utilizing ultrasonic sound waves ultrasonic sensor uses detector for send and receive ultrasonic pulses that relay backword details about an objects nearness.

## CONCLUSION

people are becoming more susceptible to accident nowadays so we need to take some action against this as an engineer and have the solution we want any automation is created for the protection of the human being such a model has the function of advancing a program to identify fatigue symptoms in drivers and to regulate vehicle speed to prevent accidents up to some degree modern technology gives some hope to stop these this paper involves measuring alcohol using alcohol sensor and monitoring eye blink with the help of an ir sensor in this device sensor outputs are given for comparison to the arduino if the value hits a set level the buzzer automatically emits vibration led glows and the vehicle is slowly stopped automatically when the alcohol sensor or eye blink sensor receives the signal from the relay module.

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