

Alcohol Detection and Engine Locking System

This system provides a unique method to curb drunken and drowsy people. This system has an alcohol sensor and eye blinking sensor embedded in the vehicles. Whenever the driver start vehicle, the sensors sense the eye blink and the consumption of alcohol by the drive. We also used an accident sensor to detect whether the vehicle is going in a normal condition or not. GSM (Global System for Mobile communication) and the GPS module is used to detect vehicle location. In this device we have implemented an alarm system if the driver has alcoholic or if the system detects eyeblinks or if the system detects accident, then the system will send car's location to the predefine mobile number and the ignition system of the car will go OFF after the detection. The status of the project will display on LCD. The main controlling device of the project is Arduino UNO which is connected with input and output modules.

The main objectives of the project are:

- ▶ Sensors based automatic alcohol detection, automatic eyeblink detection and Automatic tilt detection.
- ▶ GPS and GSM based location tracking and alerting system.
- ▶ Audible alerts using Buzzer.
- ▶ Visible alerts using LCD display.
- ▶ Automatic ignition control based on driver condition.

The major building blocks of this project are:

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- ✓ **Adapter power supply.**
- ✓ Arduino UNO Microcontroller.
- ✓ Eye blink sensor.
- ✓ Alcohol sensor.
- ✓ Accident sensor.
- ✓ GSM.
- ✓ GPS Receiver.
- ✓ LCD display.
- ✓ Buzzer.
- ✓ DC Motor along with driver.
- ✓ LED indicators.

Software's used:

1. Arduino IDE for compiling and dumping code into Microcontroller.
2. Express SCH for Circuit design.

Block diagram of the project

