

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(UCG-AUTONOMOUS)**

Affiliated to JNTUA, Ananthapuramu & Approved by AICTE, New Delhi
Recognised Research Center, Accredited by NBA, NAAC for CSE, ECE, EEE, ME & MBA
World Bank Funded Institute, Recognised by UGC under the sections 2(f) and 12(B) of the UGC act 1956
Recognised as Scientific & Industrial Research Organization by DSIR of DST
Department of Electronics & Communication Engineering



Automatic Engine Locking System Through Alcohol Detection.

Mini Project

Name of Students: G. Bhuvana Chandrika

C. Bhrahma Naidu

B. Gowthami

K. Chaitanya

Registration No. : 19691A0425

19691A0426

19691A0461

19691A0428

Sem & Section : 4th year, 1st Sem – Ece -A

Faculty Name and Signature:

1. Dr. Gajendra Sharma

2. S. Ayesha Tanveer

Objective Achieved:

The main objective of this project is **to design, develop, build and demonstrate an Automatic Engine Locking System through Alcohol Detection.**

Components Used:

- Arduino Uno Board
- MQ3 Gas Sensor
- LED
- Buzzer
- SIM900A
- DC Motor
- Bread board, jumper wires

Introduction:

The current scenario shows that the most of the road accidents are occurring due to drunk-driving. The drivers who drink alcohol are not in a stable condition and so, rash driving occurs on highway which can be risky to the lives of the people on road, the driver inclusive.

The investigation done by the Planet Health Organization in 2008 shows that concerning 50% - 60% of traffic accidents square measure associated with drink-driving. Moreover, WHO information on road traffic deaths disclosed.

Worrying about the drunken driving the Project suggests the system to overcome the issue by using mQ2 alcohol sensor has come flames .MQ2 alcohol sensor is not authentic and raises the chance of false alarm while we have used MQ3 which is highly authentic.

Aurdino uno microcontroller is economical as well as can be equipped with any class of vehicle making it more authentic and successful.

Working:

In this project we have used Arduino UNO microcontroller board is economical as well as can be equipped with any class of vehicle making it more authentic and successful.

If alcoholic person tries command on vehicle the alcoholic sensor determines the existing of alcohol and sends the signal to the Micro Controller which helps to cease the function of DC motor and shut down the vehicle engine. The Buzzer which has been set up sounds an alarm by which the nearby people will exchange the seat. All these will be displayed in an LCD and People are aware of situation by the help of LCD screen present in the vehicle and hence take required action. We can avoided any kind of loss of life by using this system.

Code :

```
#include <LiquidCrystal.h> LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

int value;

int redLed = 8;

int greenLed = 13;

int buzzer = 10;

int smokeA0 = A0

{ digitalWrite(redLed, HIGH); digitalWrite(greenLed, LOW); noTone(buzzer);

{ digitalWrite(redLed, LOW); digitalWrite(greenLed, HIGH); tone(buzzer, 1000, 200);

delay(0);

}

else

}
```

```
if (analogSensor>sensor Thres)// Checks if it has reached the threshold value
```

```
lcd.print(value/10):
```

```
lcd.print("% Alcohol");
```

```
int analogSensor= analogRead(smokeA0):
```

```
Serial.println(analogSensor);
```

```
value-analogRead (smokeA0);
```

```
lcd.setCursor (1, 0)
```

```
{
```

```
lcd.begin (16, 2)
```

```
pinMode(redLed, OUTPUT);
```

```
pinMode(greenLed, OUTPUT);
```

```
pinMode(buzzer, OUTPUT);
```

```
pinMode(smokeA0, INPUT):
```

```
Serial.begin(9600);
```

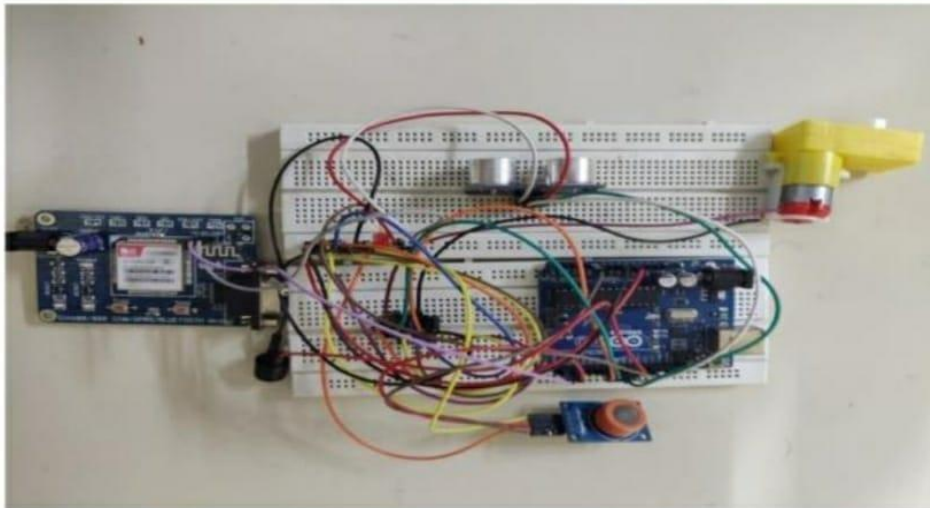
```
}
```

```
Voidsetup()
```

```
{ // Your threshold value int sensorThres =400 void
```

```
loop()
```

Circuit diagram:



Application of project:

1. The Alcohol detection with engine locking system can be implemented in any 4- wheelers.
2. The Alcohol detection with engine locking system can help prevent accidents due to drunk driving.
3. The Alcohol detection with engine locking system can be very helpful for police.

4. The Alcohol detection with engine locking system prove automatic safety system for cars and other vehicles

Conclusion:

Thus, the main objective of this project to design, develop, built and demonstrate **Automatic Engine Locking System through Alcohol Detection** has been achieved successfully.