

# Vehicle Anti-theft Face Recognition and alcohol detection System

The main aim of this project is to design a face recognition-based vehicle anti-theft and vehicle tracking system using raspberry pi and image processing.

This system uses raspberry pi circuit, it consists of LCD display, a buzzer alarm, and it also consists of a pi camera. When we turn on the system authority provided by 3 options that is registration, start and clear data, while registering, it first scans the owner's face. After successful registration, the owner can start the vehicle. If an unauthorized user tries to use the car, the system scans the person's face, and checks whether face matches with the authorized face. If it matches it can access the vehicle ignition through DC motor, if it does not match the system denies and the buzzer starts. In this way system helps to secure such intelligent vehicles. The status of the project will display on LCD.

When the vehicle theft occurs; Vehicle owner can know the location of the vehicle by sending the SMS like "WRU" to the system. System will send the replay back SMS long with location to the vehicle owner which is predefine stored into the raspberry pi through program.

When the system detects alcohol through sensor it will activate the buzzer and cutout OFF the vehicle ignition automatically.

This system consists of GSM, GPS module for sending the alert SMS along with location.

## **Components used:**

- Raspberry pi.
- Pi Camera module.
- DC motor as vehicle.
- Buzzer.

- LCD display.
- Alcohol sensor.
- GSM.
- GPS.

**Software's used:**

- OpenCV image processing.
- Linux OS.
- Python language.

**Block Diagram:**

**Raspberry pi vehicle starter on Face Recognition**

