

GSM Based Vehicle Theft Detection Using Face Recognition

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Abstract- In recent years, GPS and GSM modem detection, as well as car tracking systems, have become more popular. Face recognition based on a vehicle theft detection system would be ideal. It provides the most complete solution to problems. Face recognition technology is used in the Python Module to identify and recognize faces in real time. Face recognition technology has the ability to assist in the resolution of a wide variety of issues. A vehicle is a device or system that is used to lock and detect other cars. They may be able to determine the presence or absence of an automated owner by utilizing a Smartphone application that recognizes and compares faces within their data. If the vehicle is in good working order. Alternatively, someone tampered with the car in an attempt to disable or damage the mechanism that delivers the message and places the phone call. This device protects vehicles by allowing consumers to view theft details and download them to a USB drive. The data includes position, pose, illumination, background quality, and gender.

Keywords- Face recognition, Open CV, Vehicle Locking & Detecting, GSM.

I. INTRODUCTION

With so many wireless and satellite technologies available, pinpointing specific locations is straightforward. The Vehicle Tracking System reflects the international people's present way of life. The technology was combined with the use of self-driving cars and software to produce unique automobiles.

It gathers a big image of the vehicle's precise location, as well as the vehicle's track and detection system, which is often utilized with GSM.

It's utilized to find the car. Vehicle tracking and detection systems are being developed for use in transportation and activities on the ground. Its goal is to provide important information, such as the owner's estimated arrival time, in a compact and easy-to-read format. When surrounded by two or more points, the technique can also be used for communication. Wheelers are a vehicle tracking device. A vehicle tracking system with a dark blue operating system is employed for management.

II. OBJECTIVE

To keep the vehicle safe from theft and lock the engine. The main goal of this device is to secure the car from unauthorized entry and to notify the authorized person or owner of the vehicle's status via GSM communication technology.

III. LITERATURE SURVEY

Syed fasiuddin, Amena Tamkeen, "Real Time Application of Vehicle Anti-Theft Detection and Protection with Shock Using Facial Recognition and IoT Notification" [1] Vehicle technology system enhancement is gaining study popularity, as is a vehicle theft security system to avoid vehicle theft in parking lots and sometimes while driving in unsecured areas.

When an illegal individual tries to start the ignition and is warned by the IOT application, the suggested solution provides security and enhanced theft

control by using facial recognition and shock treatment. The system uses a Raspberry Pi microprocessor, a pie cam, and a WIFI controller put in the vehicle. The implemented system is relatively simple, with improved security for vehicle anti-theft protection and a lower cost technique when compared to others.

Sayanee Nanda, Harshada Joshi, "An IOT Based Smart System for Accident Prevention and Detection" [2] Accidents are becoming more common these days. Every hour, around 17 accidents occur. Bike accidents account for a sizable proportion of all accidents, owing to the fact that two-wheelers lack many of the safety features found on four-wheelers. It can be caused by not wearing a helmet, feeling drowsy while driving, drinking alcohol, two vehicles coming into closer proximity without both drivers' notice, breaking traffic signals, driving without a valid or no driving license, careless driving, unintended triggering of the accelerator pedal, and so on.

The major goal of this work is to present may effectively help in preventing accident, and if such conditions exist, how it detects and alerts the appropriate authorities and people issue can be handled swiftly. Accidents are detected using vibration sensors and accelerometers for detection, we employ GPS and a GSM module, which locates the location of the accident and sends a text person's loved ones and surrounding hospitals. Sending a text message to local hospitals will not suffice prevents further accidents; so, this approach also meets this need.

Tahesin Attar, Prajakta Chavan, "An Attempt to Develop an IOT based Vehicle Security System" [3] The goal of this research is to assess the efficacy of GSM-based technology in transmitting SMS to clients through a physical link. To monitor and defend the car, Anti-Theft Safety Technology employs a hybrid system created for GSM. Gasoline theft, the system sends a car owner and activates the built-in alert via the buzzer. The document was recognized our country's alarming rate of fuel theft, and through this vehicle, regardless of where it is parked, but only if the GSM network is roofed.

The following are the project's goals:

- Use an infrared sensor to monitor petrol theft and fuel levels.

- Determine the gasoline requirements for long-distance travel.
- Using the GSM module, collect SMS sensing information from the vehicle owner report theft.

Astrid Gruber, Birgit Wessel, Michele Martone, and Achim Roth, "Vehicle Theft Track System king, Detecting and Locking Using Open CV" [4] GPS and GSM modem technologies have become increasingly popular in recent years. Face recognition vehicle theft detection system would be ideal. It provides the conclusive solution to a problem. Face recognition technology detects and identifies with a Python program. Face recognition software is capable of resolving and detecting device by utilizing a mobile application to recognize and compare faces within their data determines whether or not they have an automated owner.

If the vehicle is in good mechanical condition. A person attempting to disable or damage the automatic transmission of the message and call to the recipient has injured the vehicle in some way. This device protects the car by allowing consumers to review the circumstances of the theft and recording the data on a USB stick. The data on the USB stick includes information about the car's position, pose, lighting, back-ground quality, and gender.

Manoj Saini, Shagufta Khan B, "GSM Based Fuel Theft Detection" [5] The purpose of this study is to evaluate the efficacy of GSM-based technology for SMS transmission to customers via an external physical connection system. The Anti-Theft Safety Technology monitors and defends the vehicle through the use of a hybrid system optimized for GSM. In the event of gasoline theft, the system notifies the automobile owner and also activates the system's alarm via the buzzer.

Gasoline security is critical to the community, and the paper was recognized as a result of the alarming rate of fuel theft in our country, and through this vehicle, regardless of where it is parked, but only if the GSM network is roofed.

The following are the objectives of this work:

- Monitor petrol theft and fuel level using an infrared sensor.
- Calculate fuel requirements for long-distance travel.

- Collect SMS sensing information from the car owner via the GSM module in order to report theft.

IV. PROPOSED SYSTEM

Hardware has been created and is ready to use. To complete the tasks, data can be exchanged between mobile stations.

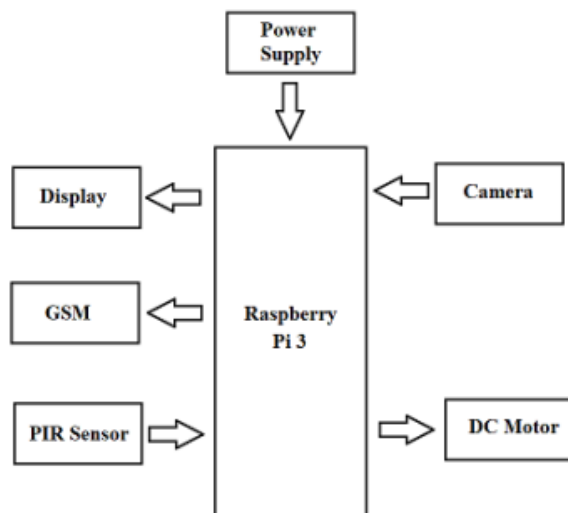


Fig 1. Block diagram.

V. CONCLUSIONS

In this study, there is an advance and the cost is also lower, thus it is safer for car users. A theft detection system can be installed on the vehicle in a secret location. This system is difficult to discover.

If an unknown person tries to break the system, the buzzer goes ON, sending an SMS to the user.

VI. FUTURE SCOPE

A nice example and a pie camera with a facial recognition system that uses the Python programming language in real time with specific photographs.

In addition, we will utilize facial recognition to monitor stolen automobiles, and in the future, we will provide a shock and alarm system that will be given to the authorized person to make it safer and secure from illegal theft. In the future, this could be the greatest option for any type of stolen automotive part.

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