

VEHICLE THEFT DETECTION MANAGEMENT USING REMOTE ENGINE LOCKING SYSTEM

Tamkar Siddhi Ramesh¹, Choudhari Saurabh Rajendra², Pujari Laxman Shreya³,
Jadhav Sanika Shailendra⁴, Prof. S. S. Patil⁵

^{1,2,3,4,5}Sou. Venutai Chavan Polytechnic, Pune, India.

ABSTRACT

Today's widespread issues related to vehicles theft are increasing on a daily basis and affecting the society in many adverse ways. In past few decades stolen rate has been increased more. Accidental- problems, rape cases, transportation and vehicle stolen causes a major challenge to all. Almost all people have their own vehicles and want to secure domain for them. Raising awareness about this major challenge, we need to make an enable innovative idea implemented on anti-theft system. This system includes the existing technologies (GPS and GSM) which increase the security rate by providing information and location about vehicles in timely manner. The stolen activities of unauthorized person are firstly alert the message to real owner of vehicle through GSM which has an interaction with microcontroller. After finding alert notification, owner send back a message to GSM which is again interact with microcontroller to deactivate the system. With instant messaging, lower communication cost, unlimited access of location and generating good feedback of a speedy progress etc, all the factors make it cost-effective and efficient anti-theft vehicle system.

1. INTRODUCTION

The vehicle theft is become a major problem that the entire world is facing now. The issue of vehicle theft has increased tremendously, mostly at parks. To stopping this issue, there is a need of theft alert system which helps to owner to ensure theft prevention and provide speedy identification of an unauthorized person who was trying to steal the vehicles.

The theft alert system makes a use of GPS (Global Positioning System) and GSM (Global System for Mobile) which are embedded in vehicle to communicate with vehicle's owner mobile phone. In GSM technology, the communication established either by an SMS or calling but we prefer the communication via SMS (between GSM and owner's mobile phone). The communication established include – Sending of an SMS by

GSM to owner's mobile phone to provide all information about vehicle and vice-versa. The GPS technology is used here to provide the exact location of target. It means that whenever any unauthorized person will try to steal our vehicles, then we can easily detect the location of theft with vehicle by using the application of GPS technology. In this system we are going to use two keys to open the vehicle lock, one is the owner's key which is used by owner and other is direct key which is used by unauthorized person. Whenever the direct key is used, the alarm become active and give the beep sound which indicate that the thief is detected. At the same time a warning SMS is sent by GSM to registered mobile number. After receiving the message, the vehicle's owner sent a message to remotely locked the engine, after turning off the engine, the motor cannot start without permission of password. In this way, this system helps in preventing the criminals from stealing vehicles.

the culinary domain. It not only enhances creativity in the kitchen but also provides a practical, intelligent solution for everyday cooking challenges. As AI continues to evolve, its application in food technology holds great promise for improving convenience, nutrition, and sustainability in modern households.

2. PROBLEM STATEMENT

Vehicle theft has become a major issue, leading to significant financial losses and emotional distress for vehicle owners. Traditional anti-theft systems, such as alarms and mechanical locks, have proven to be insufficient in preventing thefts or tracking stolen vehicles. There is an increasing need for a more effective and modern solution that combines real-time tracking, automatic alerts, and remote control features to deter and manage vehicle theft.

3. LITERATURE SURVEY

Vehicle Theft Detection and Remote

Locking, Sukhdeep Kaur Bhatia, Marium Jalis, Anshuman Gautam, Vaishali Singh

On 2 March 2018. In today's world the Vehicle theft is increasing day by day so that the Artificial Intelligence Security in our car is compulsory. this paper gives the Detailed Information about Artificial Intelligence Security System all Structure Components Required like GPS, GSM, Arduino Uno Microcontroller, Motor and Many more. And the GSM Module is used for Sending and Receiving the User Commands and System Messages. Also gives the Information of Creating the Artificial Intelligence System by and How the System works and some small Source Code Information to

Implement the Artificial Intelligence System. This paper Gives to Concern the Reliable and Economic of Vehicle Theft Detection and Remote Engine Locking.

An IoT Based Vehicle Theft Detection and Remote Engine Locking System, Madhu M Nayak (Assistant Professor, CSE Dept.), Spandana M Suresh, Tejaswini, Vaishnavi V, Yashaswini S on July 2020. This paper gives the Introduction about an IoT based vehicle theft detection and remote engine locking system is GSM technology that helps the users identify the vehicle in theft Vehicle Theft Detection Notification And Remote Engine Locking System Department Of

Computer Technology Academic Year 202223 4 mode and enables the controlling mechanism. Vehicle theft has become a major issue which should be traced and prevented. The proposed system overcomes most of the limitations and the cost effectiveness and also reducing complications by making use of few highpriced products like ignition key.

4. PROBLEM SOLUTION

A *Vehicle Theft Detection Management System* using a

Remote Engine Locking System enhances vehicle security by integrating GPS tracking, sensors, and remote engine immobilization. If unauthorized access or tampering is detected, the system sends alerts to the owner's mobile device and can remotely lock the engine, preventing theft. The GPS allows real-time tracking of the vehicle's location, while sensors monitor doors and windows for any unusual activity. This system provides proactive protection and immediate response, significantly reducing the chances of vehicle theft.

5. SCOPE OF PROJECT

1. Theft Detection*: Using motion, vibration, and door sensors to detect unauthorized access, triggering alerts.
2. Real-Time Tracking*: GPS to track the vehicle's location, with geofencing for boundary alerts.
3. Remote Engine Locking*: Enabling owners to remotely disable the engine via a mobile app or SMS.
4. User Interface*: A mobile app and web platform for tracking, notifications, and control.
5. Data Storage & Analysis*: Storing vehicle data in the cloud and analyzing it for security improvements.
6. Security*: Ensuring data encryption and user authentication for privacy.

The project aims to provide enhanced vehicle security by combining IoT technologies for theft detection, tracking, and remote control.

6. CONCLUSION

The design and implementation of this system allows safety and security to the vehicles. A simple, cost efficient anti-theft security system has been successfully designed. This system helps in tracking exact position of target (vehicle stole by thief) as well as in locking the vehicle through SMS in perspective of remote control. All these functions achieved by GPS and GSM application. This system also helps in detection of an accident and send information to the vehicle's owner. The technologies of speed, the GSM/GPS wireless transmission have good perspective in the safety domain's application. The advantage of this system is that it prevents criminal from stealing vehicles very effectively. In addition to this, this system reduced the accidents and save the human lives. This system can be implemented in real time.

7. REFERENCES

- [1] "Vehicle Theft Detection and Tracking Notification with Remote Engine Locking System using IOT:" by T. Sujith, S. Jhansi, A. Ashish and A. Karthik Sagar on 7 July 2021.
- [2] "Vehicle Theft Detection and Remote Locking" by Sukhdeep Kaur Bhatia, Mariam Jalis, Anshuman Gautam and Vaishali Singh on 2 March 2018.
- [3] "An IoT Based Vehicle Theft Detection and Remote Engine Locking System" by Madhu M Nayak (Assistant Professor, CSE Dept.), Spandana M Suresh, Tejaswini, Vaishnavi V and Yashaswini S on Published on June 2020