



# Vehicle Theft Recovery

S.Theepa Sri, B.Sivasankari, K.Subhikshaa, M.Yasmin Fathima, V.Sivakumar

**Abstract:** Presently a-days the whole world is confronting the instability which has gotten one of the major challenges. Each nation has their own unconventional security issues. The crime percentage in all aspects of our general public nowadays has become an undermining issue with the end goal that vehicles are currently utilized for carrying out crimes more than previously. The issue of vehicle robbery has expanded massively, for the most part at gunpoint or vehicle leaves. There is a requirement for reasonable records of taken, recognized and recuperated vehicles which are not promptly accessible in our general public and in that capacity significant. The improvement of a vehicle robbery caution and area distinguishing proof framework turns out to be increasingly essential for vehicle proprietors to guarantee burglary anticipation and an expedient recognizable proof over recuperation which incorporates missing of vehicles by an unapproved individual. Our model utilizes a GSM application created and introduced in a cell phone gadget that is installed in the vehicle to speak with the vehicle proprietor's cell phone through SMS. The correspondences set up incorporate; (I). Sending an alarm message from introduced cell phone gadget to vehicle proprietor portable phone.(ii).Sending an admonition message from the vehicle proprietor's cell phone to begin and stop the introduced cell phone. Decide the present area of a vehicle utilizing GPS.

**Keywords :** GSM,GPS, Arduino, Theft, Vehicle

## I. INTRODUCTION

The prime point of the task is to derive the crime percentage in nations which has fast development in the environment.It is probably the greatest offense which is difficult to dispose of. The most recent pattern of vehicle burglary includes the vehicle being towed away.

There are numerous choices to forestall vehicle robbery, a typical vehicle caution framework in which almost all vehicles have the framework introduced, and furthermore Global Positioning System (GPS) where the vehicle can be followed. The undertaking and research are directed, so as to upgrade the extra highlights in the model. An equipment gadget can be added to the present vehicle caution framework with no significant change to it. The Vehicle security framework utilizing SMS/GPRS is a propelled highlight of the current vehicle security framework.

The task comprises of an equipment gadget will gather the present situation of the injured individual to send the area through SMS (Short Message Service) or GPRS (General Package radio assistance). If there should be an occurrence of vehicle being taken, the data about the area of the vehicle can be gotten by sending the message "TRACK" to the sim in the equipment gadget being mounted on the vehicle. Thusly, the specific area of the vehicle can be followed through the SMS got.

## II. PROBLEM STATEMENT

Once the vehicle is stolen, the location of the vehicle changes, the owner can send a message to the vehicle to track its current position. The SMS sent would pass through the GSM service provider and then reach the vehicle, which is traveling, because the vehicle has a GSM device with a SIM card. This GSM modem will receive the SMS and send it to the mobile phone. It will then intimate back with the required location: latitude, longitude and time to the registered number of the owner and the results will be displayed on the screen of the owner's mobile phone.

## III. OBJECTIVE OF THE STUDY

1. The goal of the task is to follow the vehicle in assistance with the Global Positioning System and Global System for Mobile Communication.
2. To give an answer for stay away from the vehicle being taken than advance security framework (GPS).

## IV. SCOPE OF STUDY

On the off chance that the vehicle gets taken, it is hard to monitor it. With the guide of this task we can follow the area of the taken vehicle.

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\* Correspondence Author

**B Sivasankari\***, Department of Computer Science and Engineering, National Engineering College, Kovilpatti, Tamil Nadu, India .  
Email: sankarisiva2610@gmail.com

**K.Subhikshaa**, Department of Computer Science and Engineering, National Engineering College, Kovilpatti, Tamil Nadu, India .  
Email: subhikshaa99@gmail.com

**S.Theepa Sri**, Department of Computer Science and Engineering, National Engineering College, Kovilpatti, Tamil Nadu, India .  
Email: theepasri1998@gmail.com

**M.Yasmin Fathima**, Department of Computer Science and Engineering, National Engineering College, Kovilpatti, Tamil Nadu, India .  
Email: abqurah.faya@gmail.com

**\*Dr.V.Sivakumar**, Assistant Professor, Department of Computer Science and Engineering, National Engineering College, Kovilpatti, Tamil Nadu, India. Email: sKumar@nec.edu.in

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## V. BLOCK DIAGRAM



**Fig 5.1: Block Diagram**

The fig 5.1: block diagram clarify the working of vehicle following framework which can do following of moving vehicles in enormous zones. It comprises of two sections, first, will be inbuilt in the vehicle which has GPS in it. Since the vehicle moves, the area of the vehicle changes continuously. The GPS finds the area regarding two co- ordinates that are Longitude and scope. These directions are imparted to another segment by the GSM modem. At that point the GSM will give a message to the clients portable.

## VI. TERMINOLOGY

### A .Latitude & Longitude:

Both portrays the point that are extraordinarily characterized in the circle. Together the edge contains the co-ordinate plot that can find or recognize the geographic situation on the planet. Scope is characterized as the central reference, the worth gets positive as it moves towards the north and it gets negative towards the south. Longitude is estimated with respect to prime meridian and is sure towards the east and negative towards the west.

### B. Tracking:

It is utilized to follow the vehicle for security of the vehicle. In this day and age following framework is utilized wherever to streamline the day by day tasks of the equipment introduced vehicles.

### C. GLOBAL POSITIONING SYSTEM

The Global Positioning System has been created by the Department of Defense. It comprises of a gathering of 24 satellites which are observed by five ground stations. The GPS permits you to pinpoint your area anyplace on the outside of the Earth, regardless of the climate conditions, with the utilization of a GPS beneficiary. The beneficiary is a navigational gadget that utilizes these satellites as reference focuses to ascertain your situation on the ground. This is finished by triangulating your situation between at any rate 3 satellites. So as to figure the 2D positions (scope and longitude) and to follow the development, a GPS collector should be bolted on to the sign of at any rate three satellites. The beneficiary can decide the client's 3D positions (scope, longitude and elevation) with the assistance of at least four satellites in see. When the client's position is resolved, the GPS units can figure the other data, for example, speed, bearing, track, trip separation, dawn and dusk time and the sky is the limit from there. At the point when individuals talk about " GPS," they normally mean a GPS beneficiary.



**Fig 6.1: Global Positioning System (GPS)**

### D. GLOBAL SYSTEM FOR MOBILE COMMUNICATION

GSM represents Global System for Mobile Communication. This is an open and an advanced cell innovation utilized for transmitting versatile voice and information administrations. The GSM was risen up out of the possibility of cell-based portable radio frameworks in the mid 1970s.. The GSM standard is actualized all inclusive, and is the most generally acknowledged standard. The GSM is a circuit-exchanged framework. It isolates each 200kHz channel into eight 25kHz schedule vacancies. GSM works in the 900MHz and 1.8GHz groups and the 1.9GHz and 850MHz groups in Europe and the US individually. The GSM arrange has four sections that cooperate to work overall: 1) The cell phone itself 2) The base station subsystem 3) The system exchanging sub-framework 4) The activity and bolster sub-framework . The cell phone is associated with the system through equipment. The SIM card gives the system distinguishing data about the portable client.



**Fig 6.2: Global System for Mobile Communication (GSM)**

**E. ARDUINO**

The Arduino is an open-source microcontroller that can without much of a stretch be customized, deleted and reinvented to make intuitive undertakings. Microcontroller is brief processing framework that is adequately utilized for low memory and force configuration purposes. At the end of the day, a microcontroller is a microchip which is mounted on a circuit board with memory, read-compose abilities, sources of info, and yields. The Arduino device has been presented in the market in the year 2005. The prime motivation behind arduino is to offer a simple and cheap stage for understudies and experts to make imaginative frameworks and gadgets that would cooperate with the earth utilizing actuators and sensors. It likewise offers an open-source registering stage utilized for programming and creating electronic gadgets dependent on basic microcontroller sheets.



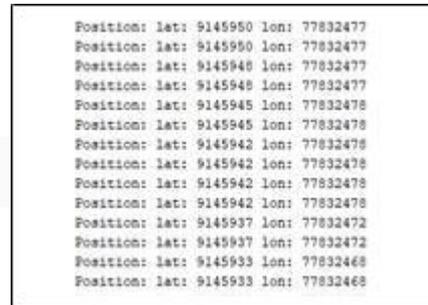
**Fig 6.3: Arduino**

**VII. WORKING EXPLANATION**

This project controls the entire procedure with a GPS Receiver and GSM module. GPS Receiver is utilized to identify the co-ordinates of the vehicle, GSM module is utilized for sending the co-ordinates to client by SMS. At that point a 16x2 LCD is additionally used to show the status messages or co-ordinates. GPS Module SKG13BL and GSM Module SIM900A has been utilized. At the point when the client is prepared with the equipment in the wake of programming, they can introduce it in the vehicle and force it up. The client needs to send a SMS "Track" to the framework that is mounted on the vehicle. GSM Based Home Automation and Wireless Notice Board message is gotten by GSM module which is associated with the framework and sends message information to Arduino. The arduino understands it and concentrates the prime message from the entire message. It is then contrasted and predefined message in Arduino. On the off chance that any match happens, at that point Arduino peruses organizes by extricating \$GPGGA String from GPS module information and send it to client by utilizing GSM module. This message contains the directions of vehicle area.



**Fig 7.1: VTR prototype**



**Fig 7.2: GPS output**

**VIII. CONCLUSION**

The venture has been effectively evolved and actualized a vehicle following framework that gives data about the area of taken vehicles utilizing GPS-GSM innovation. Vehicle following framework has fast development in enormous urban areas and it is more made sure about than different frameworks. A versatile gadget that is anything but difficult to convey, and can be utilized for different purposes effortlessly of access. It isn't just used to discover the area yet additionally computes the separation went between two stations. It can give a superior after-effect of overseeing huge benefits, viable planning. This undertaking is appropriately actualized and will improve security, decrease vehicle misfortune because of robbery, increment profitability, lessen redirection of courses by transport organization's drivers. We are as yet taking a shot at the chance of improving the framework to give SMS criticism to the vehicle proprietor when a mishap happens. This will assist with decreasing the postponement in the clearing of mishap exploited people to the medical clinic and lessen the odds of losing a real existence.

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### AUTHORS PROFILE



**B. Sivasankari** currently pursuing her Bachelor of Engineering in Computer Science and Engineering from National Engineering College, TamilNadu, India. Her area of interests are related to Internet of Things. Email:sankarisiva2610@gmail.com



**K. Subhikshaa** currently pursuing her Bachelor of Engineering in Computer Science and Engineering from National Engineering College, TamilNadu, India. Her area of interests are related to Cloud Computing. Email:subhikshaa99@gmail.com



**S. Theepa Sri** currently pursuing her Bachelor of Engineering in Computer Science and Engineering from National Engineering College, TamilNadu, India. Her area of interests are related to Internet of Things. Email:theepasri1998@gmail.com



**M. Yasmin Fathima** currently pursuing her Bachelor of Engineering in Computer Science and Engineering from National Engineering College, TamilNadu, India. Her area of interests are related to Internet of Things. Email:abqurah.faya@gmail.com



**Dr. V.Sivakumar**, received his Master of Engineering in Computer Science and Engineering from Anna University, Tamilnadu, India. He is working as an Assistant Professor in National Engineering College, Tamilnadu, India. Currently, he completed his Ph.D. in MS University Tamilnadu, India. His research interests are related to Computer Networks. Email: skumar@nec.edu.in