

## Raspberry Pi-2 Based Anti-Theft System for Car Logo

<sup>1</sup>Chaitali N. Surkar <sup>2</sup>Prof. Amit Welekar

**Abstract:**-In this paper we present a solution on how to protect the car logo with affordable cost. Here, we make an attempt to develop a system based on raspberry pi-2 technology. With this system when someone is trying to steal the car logo it alerts the car owner when he is at nearest distance as well as when he is far away from the car. When someone is trying to steal the car logo it alerts the car owner with alarm when he is at nearest distance. But with this alarm it is not possible to alert the car owner who is unable to hear that alarm. So in that case we can use GSM network to send the text message to the car owner at his phone. Added to this the car owner will get the captured image of that thief.

**Keywords:** *Raspberry –Pi, GSM, Camera, Pressure sensor.*

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### I. INTRODUCTION

Vehicle is the primary spot where security begins. In nowadays, auto logo robberies are expanding. In India, logo of vehicle is stolen at regular intervals a disturbing insights. Henceforth we must need vehicles to furnish with the most recent pattern of advancements and measures to make it a safe from criminal. The security framework has been improved in all fields in the general public. Car security has likewise accomplished numerous fast changes, yet the expenses of all the security redesigns are so high and it is not moderate for all the vehicle proprietors. This venture is meant to give the best security answer for auto logo at reasonable expense. Here, we make an endeavor to add to a framework in light of raspberry pi-2 innovation. In proposed framework we show an answer on the best way to secure the auto logo.

With this framework when somebody is attempting to take the auto logo it alarms the auto proprietor when he is at closest separation and in addition when he is far from the auto. The framework consequently alarms the auto proprietor and gives abnormal state security. The Raspberry Pi 2 model B is the second era Raspberry Pi. It supplanted the first Raspberry Pi 1 Model B+ in February 2015. Raspberry pi is a Visa estimated PC. It works very nearly as a PC. It offers more adaptability for learners than the leaner (Pi 1) Model A+, which is more helpful for implanted ventures and tasks which require low power.

### II. LITERATURE REVIEW

**Paper 1.** Finger Vein Recognition Based Driver Authentication and Alertness System Using GSM.

In this paper author suggested that with the assistance of biometric framework we can secure our car. We need to begin the motor by squeezing their finger in the biometric framework. There are two conceivable outcomes that finger vein match or neglect to coordinate. In the event that the finger vein is match vehicles begin working appropriately. On the off chance that it neglects to match it cautions the auto proprietor by sending the message through GSM system. This framework additionally alarms about the driver liquor admission and sleepiness. This framework depends on the Raspberry pi innovation.

**Paper 2.** Smart Surveillance Monitoring System Using Raspberry PI and PIR Sensor.

In this paper author recommended that keen observation using so as to check framework is actualized Raspberry pi and PIR sensor. There is infrared sensor to identify the vicinity of number of persons in the room. Camera is naturally turned on when the vicinity of individual is distinguished. At that point the data is caught and sends it to the advanced mobile phone of approved individual through 3G Dongle.

**Paper 3.** Smart Automobile Security System Using Lab view.

In this paper manages the outline of the framework, which will give the arrangement on the best way to secure the vehicle with GSM innovation. The framework is utilized to control the outlet of the fuel injector by method of electronic solenoid valve, which will be controlled by the microcontroller through the driver circuit. The secret key is given to the approved individual of the vehicle. The solenoid opens and the vehicle begins unless and until the secret word will coordinate. In the event that it neglects to coordinate, the framework will send message to the approved individual by means of GSM modem. A caution is likewise joined to the framework. LABVIEW stage can reproduce the framework.

**Paper 4.** Ignition Alert Anti-Theft Security System for Motorbikes with Remote Control.

In this paper author recommended that when somebody is attempting to take the motorbike it will stop the ignition of vehicle and caution the proprietor with alert. It is exceptionally troublesome for the criminal to take the vehicle by utilizing this gadget. Sensors are set on the vehicular body. It will stop the ignition of the vehicle when somebody touches it and when any one is attempting to touch for more than 3 times. Unless and until we deactivate the gadget with remote the ignition of vehicle won't begin.

**Paper 5.** Intelligent Anti-Theft and Tracking System for Automobiles.

In this paper author proposed a productive car security framework is executed for hostile to robbery utilizing an installed framework involved with a Global Positioning System (GPS) and a Global System of Mobile (GSM). By utilizing Google Earth, The customer connects through this framework with vehicles and decides their present areas and status. The position of focused vehicles can be followed by client on Google Earth.

**Paper 6.** Microcontroller Based Anti-theft Security System Using GSM Networks with Text Message as Feedback.

In this paper proposed a framework with Dual Tone Multi Frequency (DTMF) and a GSM to screen and shield an auto. Sensors are set at the auto entryways and boot. The framework gets initiated when any individual is attempting to robbery through auto entryways or boot. At that point it consequently grounds the auto by disengaging the ignition key supply from the auto battery. Additionally send the ready message to the auto proprietor and also begins up an alert.

**Paper 7.** GSM Based Car Security System.

In this paper author suggested that the point of this framework is to attempt to spare the auto in light of GSM innovation. When somebody attempt to take your auto it cautions the auto proprietor with alert and also send the ready message to the auto proprietor through GSM system.

**Paper 8.** Real Time Vehicle Tracking System using GSM and GPS Technology- An Anti-theft Tracking System.

In this paper gives the two route correspondence between the approved individual and introduced framework. More elevated amount of auto security components is given by this framework. At the point when interruption is recognized this framework will send the notice message to the auto proprietor. When the auto proprietor gets the message he has power to control any auto highlight through his PDA. This framework is additionally ready to distinguish the area of the auto by utilizing GSM situating idea.

**Paper 9.** The Design of Mobile Control Car Security System.

In this paper gives the two way communication between the authorize person and installed system. Higher level of car security features is provided by this system. When intrusion is detected this system will send the warning message to the car owner. As soon as the car owner receives the message he has authority to control any

car feature through his smart phone. This system is also able to detect the location of the car by using GSM positioning concept.

**Paper 10.** Embedded Automobile Engine Locking System, Using GSM Technology.

In this paper author suggested that anybody can keep the robbery of car by utilizing GSM innovation. This framework is introduced in the motor of vehicles with the GSM modem which is likewise associated with the microcontroller. On the off chance that any individual needs to begin the vehicle then he needs to sort the secret

word. At the point when the secret word coordinates then and at exactly that point ignition of the vehicle will begin. On the off chance that the secret key neglects to match up to the three trials then framework will start the siren and it will send the message to the auto proprietor through GSM system.

**III. DISCUSSION**

After studying the above papers, it is found that there are many security systems available for car safety but there is no such a system design for car logo safety. For that purpose we develop a system based on raspberry pi-2 technology which gives the best security to the car logo.

**IV. PROPOSED SYSTEM**

The proposed system is planned to be carried out in the following manner.

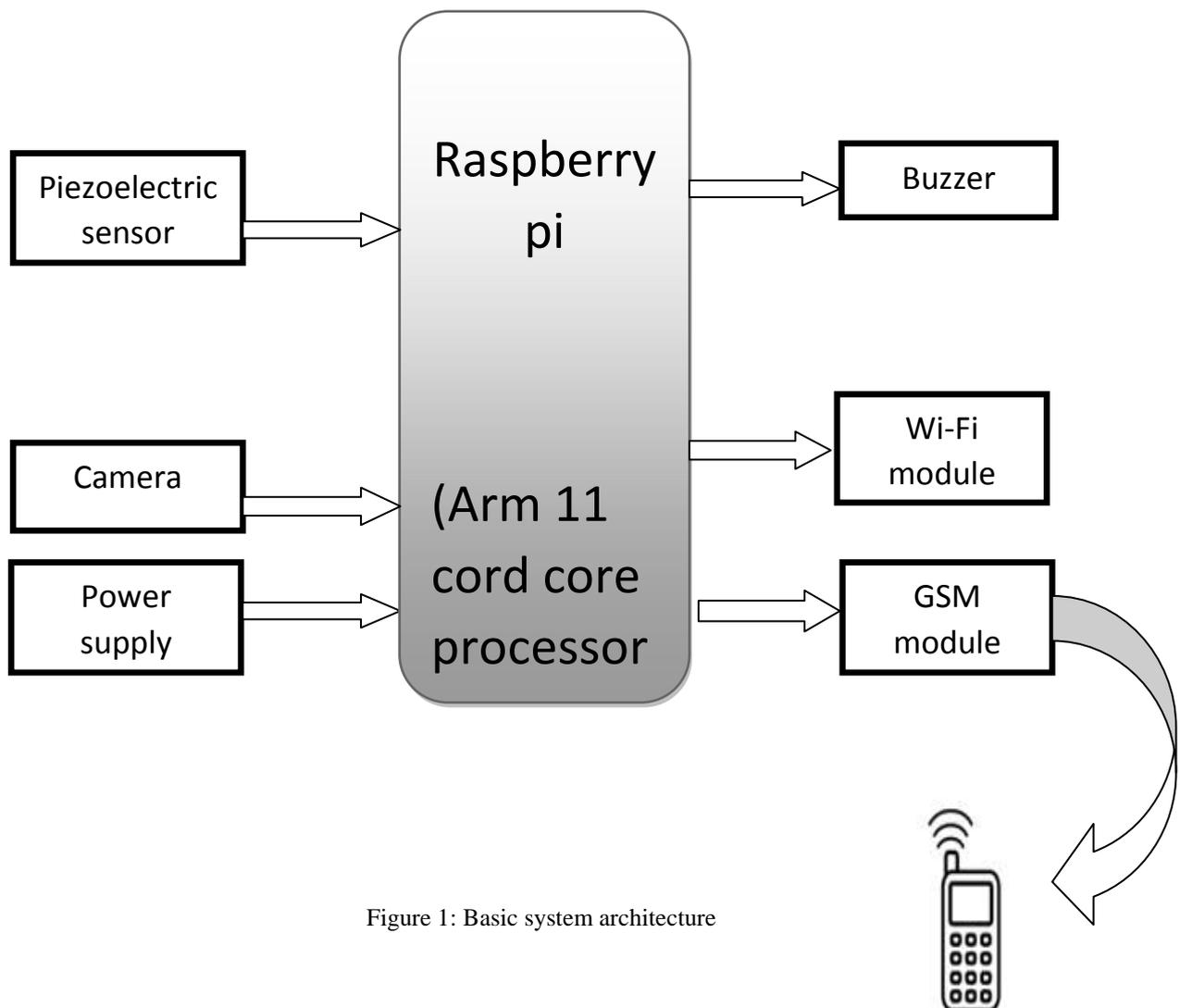
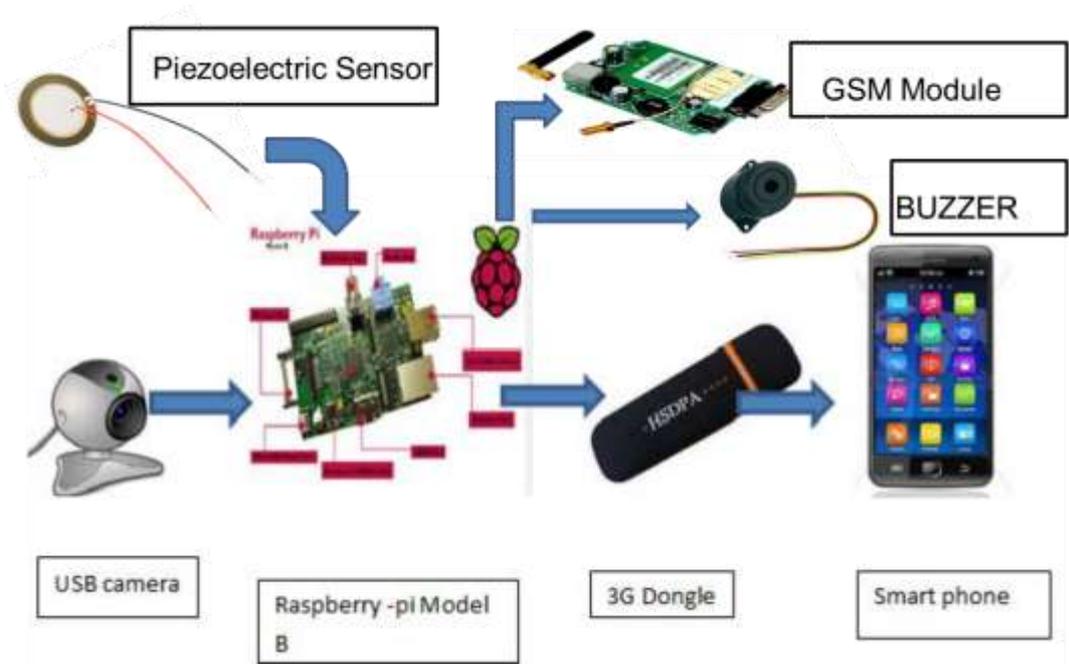


Figure 1: Basic system architecture

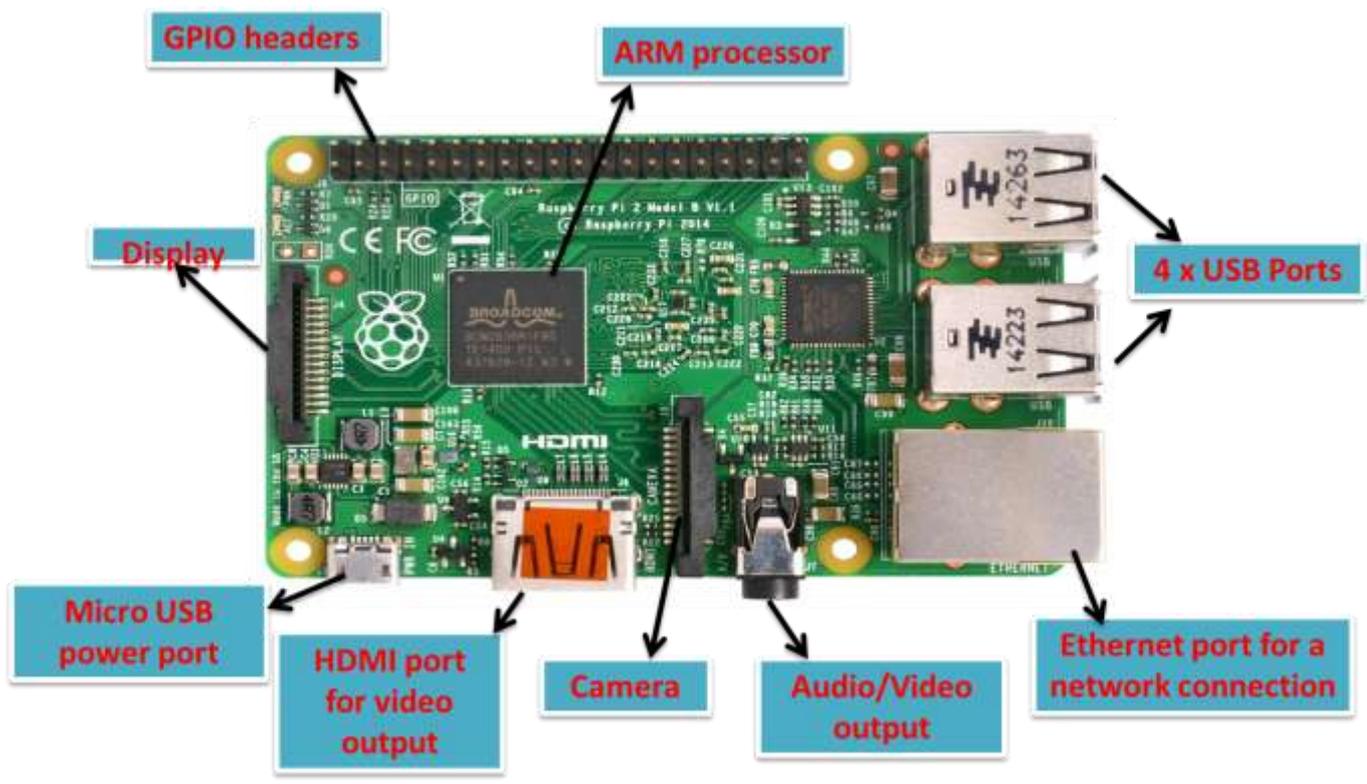
When someone is trying to steal the car logo it alerts the car owner with alarm when he is at nearest distance. But with this alarm it is not possible to alert the car owner who is unable to hear that alarm. So in that case we can use GSM

network to send the text message to the car owner at his phone. Added to this the car owner will get the captured image of that thief.

### V. BASIC CIRCUIT BASED METHODOLOGY



### VI. RASPBERRY PI-2 CIRCUIT DESIGN



## VII. CONCLUSION

Thus we have introducing car logo anti-theft system. This system is capable of protecting the car logo by alerting the car owner. Also it will capture the image and transmit it to a smart phone. With the help of this system we can take necessary action against theft with proof. We create this system with effective current technologies and software algorithm.

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