Woman Security Using Raspberry Pi

Mahadev N. Kore
Dept. Of E&TC Engineering
Keystone School of Engineering
Pune, India
mahadevkore589@gmail.com

Seema R. Mahajan
Dept. Of E&TC Engineering
Keystone School of Engineering
Pune, India
m.seema2011@gmail.com

Ashvini A. Mamde
Dept. Of E&TC Engineering
Keystone School of Engineering
Pune, India
ashvinilonare1234@gmail.com

Sharwari Kulkarni
Dept. Of E&TC Engineering
Keystone School of Engineering
Pune, India
kse.sharwari@gmail.com

Abstract— Women's security could be a concern in today's society. A little keen gadget can decrease this issue. A shrewd gadget with an SMS alarm highlight with real-time. area following can guarantee a lady to move openly. This inquire about points to construct a security gadget for women's security. This investigate presented a savvy gadget that will take a few activities to distinguish the user who is in inconvenience. The framework features a Camera which takes pictures of the ladies or Kid who are in inconvenience. The framework has inbuilt GPS & GSM.GPS is used to follow the location.

The centers on a security framework that's arranged fair to supply the reason of giving security to ladies so that they never feel feeble whereas confronting such social challenges. The next framework can be built that can capture and stream the video of the occasion as well as send the emergency messages of the casualty through GSM to particular portable numbers.

Keywords: Raspberry pi, Freeze Button, Women's Security, Security Device.

I. INTRODUCTION

In the current situation, women's as well as kid's safety are primary concern worldwide due to crime rises against women & kid's We can't have a day without sexual harassment & kid's kidnapping racket news in our newspaper and television news. It's widely happening in urban and cities. We can't change the mind-set of the entire people of a society or remove all the criminals from society. But we can provide digital gadgets to them so that they can protect themselves. This research aims to design and build a hard ware device to ensure a woman's safety at a low cost.

Within the current circumstance, women's as well as kid's security are essential concern around the world due to wrongdoing rises against ladies & kid's We can't have a day without sexual badgering & kid's capturing racket news in our daily paper and TV news. It's broadly happening in urban and cities. We can't alter the mentality of the complete individuals of a society or evacuate all the offenders from society. But ready to give computerized contraptions to them so that they can secure themselves. This investigate points to plan and construct a hard product gadget to guarantee a woman's security at a moo cost. In today's world, ladies ought to pass through parcels of circumstances like night shifts, traveling alone with cab driver& that make them feel hazardous. Thousands of girls are in peril in our nation in their existence as they are working. They confront sexual badgering and physical mishandle in their day to day life. This inquire about approaches a shrewd gadget for ladies. The framework will inform a family part or concerned specialist with location data in the event that the user found herself in hazardous condition.

The Indian lady of today is increasingly a portion of the open places, claiming her legitimate put within the civilization and the commercial world. She guarantees that she is being listened. Juggling work, marriage, children and a home, or giving up one in favours of the other, ladies in our nation have without a doubt come a long way, indeed on the off chance that there's a longer way still to go. One certain reality that has tragically not changed, and has ended up harsher with passing time, is the address of women's security. Final few a long time prior the terrible Nirbhaya incident caught the consideration of the entire nation and the world. Since at that point, a part was guaranteed and budgets were affirmed for women's security, but we know that small has moved in these a long time. Time and once more, we have to twist our head in disgrace, not fair for the proceeding rage of occasions but also for our inability to attempt such a danger with determination. It is only natural, then, that efforts toward women's empowerment, both government and corporate-driven, are more eagerly focused on safety against sexual assaults. There's a need of simpler safety resolution that can be activated as simply as by pressing a switch and can instantly send out alerts to the near ones of the victim. This project focuses on a security system that's exclusively to serve the purpose

of providing security and safety to women. The objective of study work is to form safety device for women, which provides following facilities 1. Alerts family and friends by sending emergency message with her location. 2. Captures photo of victim.

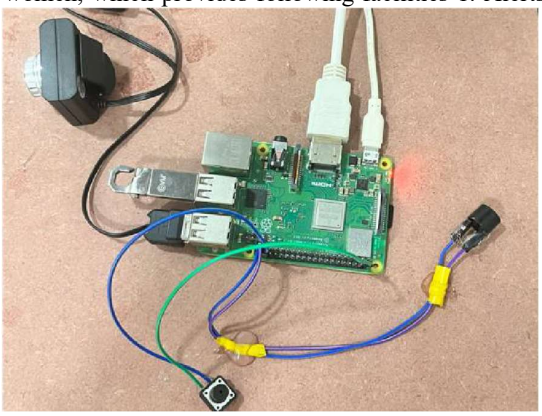


Fig 1: Hardware

Fig 2- Raspberry Pi

anomalies and a message to alert the dear ones is sent using GPS and GSM module.

II. LITERATURE REVIEW

The research of S. A. More [1] discusses using temperature sensors and pulse rate sensors to automatically detect a chance of a possible situation and notify family and friends using a mobile application. [2] discusses the usage of image processing to detect any possibility of danger and proposes various solutions to protect herself. In [3] the authors developed a device which employed PIC16F876A microcontroller and a SIM808 module, which has GPS, GSM and GPRS support which are used to notify the friends and family when the emergency button is pressed. In [4] a system based on the facial features is developed. If the facial expression is a threat-based expression, then a report is filed. About [5], GSM and GPS are used to build a safe device. In this system, the message is sent to pre-stored mobile numbers which consist of the body posture of the victim along with her location. In [6] independent triggering of android application and arm device takes place with the help of synchronized Bluetooth connection. The audio and video that have been recorded are sent to the phone numbers which are pre-set in the application along with the location

in the form of a call and also a message to alert them. In [7], an android app is developed which gives the location of the woman in danger by giving fake phone calls, video forwarding, location and first aid information. In [8], body vibrations, heart rate and body temperature are sensed using sensors by the help of a reliable security device which consists of ATMEGA8 controller with Arduino tool and advanced sensors. In [9], three sensors namely heartbeat, temperature and accelerometer are used.These sensors are used to detect if there are any

III.METHODOLOGY

Manual mechanism (see Fig. 1) is the process flow which occurs when the women are in a situation to respond. It contains a button which can be pressed by the woman when she feels unsafe. When the button is pressed, the camera is activated to take picture of the victim & send it to his emergency contact number.

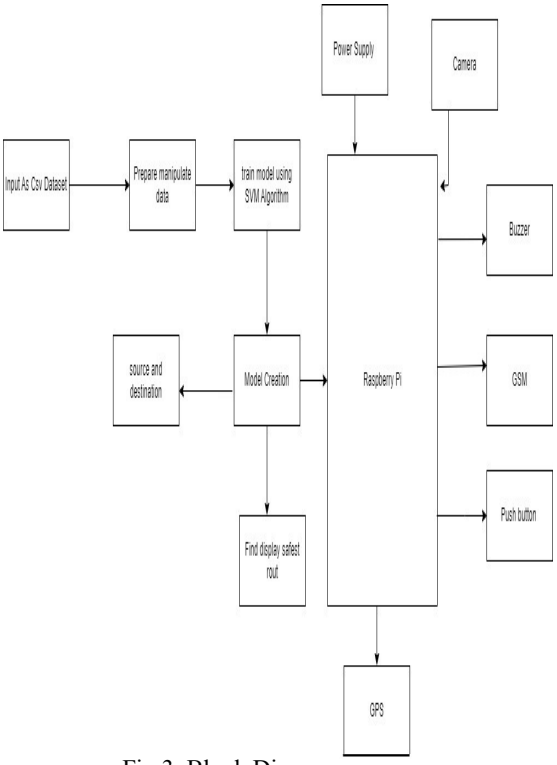


Fig 3. Block Diagram

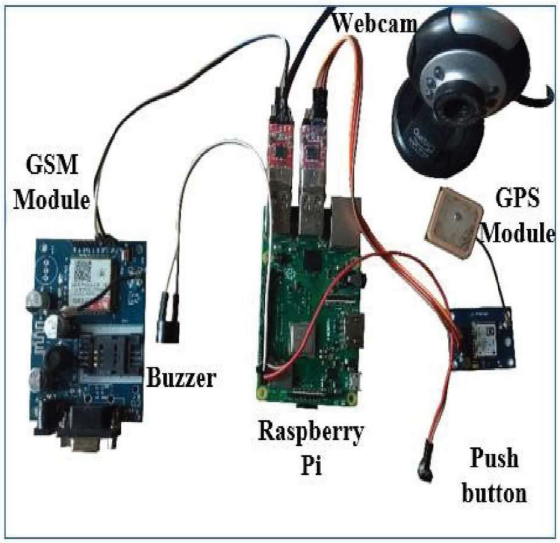
Explanation of block diagram:

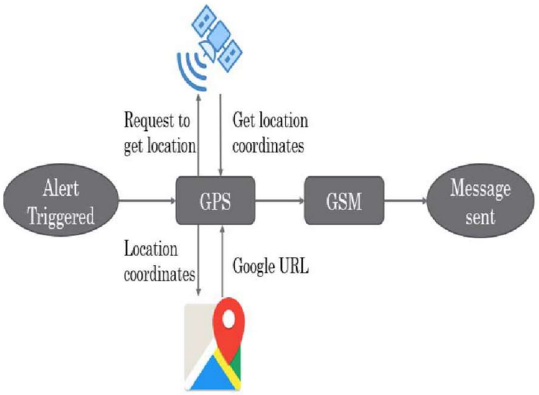
Software Part:

Giving the machine the dataset is the starting step. CSV is the arrange utilized for the dataset. We offer the machine with the most secure course dataset in this CSV format.

Pre-processing is the taking after arrange. Expel all botches and commotion from the dataset amid the pre-processing stage.

SVM procedure was utilized when classifying information. utilizing the SVM strategy, prepare the show. at that point make the categorization show, and final test the comes about. Whether the way is the





safest.

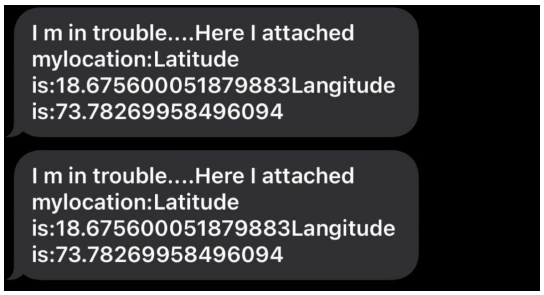
Hardware Part:

The Raspberry Pi serves as the brain of our system in this project. The Raspberry Pi, GPS, and GSM

modules are initialized when the system is turned on. The user will push the button whenever he runs into danger. When the panic button is touched, the Pi immediately reads the user's GPS location and uses the GSM module to send the user's location link to the police and emergency contact. Additionally, the USB web camera the ambush, the casualty, and surrzone and emails the photos to the fitting specialists at the side connect to the area that can be opened in Google Maps.

IV. EXPERIMENTATION AND RESULTS

Figure shows the snapshot of the SMS alert with
Google map location link received in the mobile of the emergency contact. By clicking the link, the care taker or police can know the exact location of the victim and reach the place or inform the nearest police station to protect the victim.



V. CONCLUSION

Main purpose of the system is fast process, low cost of development, acceptable quality, accurate tracking. This paper put forth a technique where a woman, when in danger, can instantaneously intimate to the concerned authorities. The proposed technique uses GPS tracking of the smart phone to get the device's co-ordinates. This technique further uses URL of the image and alert message to inform the family and police personnel.

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