

SMART GADGET FOR WOMEN SAFETY USING RASPBERRY PI

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Abstract - To help pre-solved women safety issue, a RASPBERRY PI based women safety is proposed that has dual safety. The system can be turned on by the women even if thinks she is in danger. It is useful because once an incident occur she may able to press the emergency button. The implementation of the smart gadget is basically split into two sections the first part ensures to capture the image of the Culprit the device get automatically triggered when there is a suspected motion in front of the camera, the device captures the image of the culprit and send it as an attachment to the concerned E-mail Id along with the location of the Victim. The captured image serves as the valid proof against the one who has committed the crime. An emergency button is placed on the band at a particular position. Whenever the woman is in any kind of trouble, she could press the emergency button and an alert will be immediately sent to the preset contacts such as parents and police. Buzzer is provided within the device, when the device gets activated the buzzer produces high sound in the surrounding. So, that the people in the surrounding may hear the sound and come for rescue.

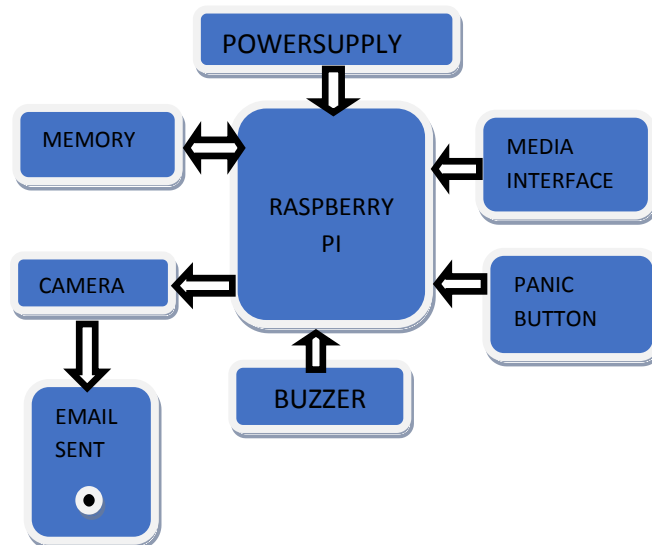
1. INTRODUCTION

Women security is a very important issue due to raising crimes against women these days. As we know the present era is with equal rights, where in both men and women are taking equal responsibility in their respective works. Hence women are giving equal competition next to men in all fields, they are assigned works in both even and odd shift. Every single day women and young girls from all walks of life are being assaulted, molested and raped. According to disha incident, the victim was kidnapped from lonely spot near a toll plaza on the national highway where she was seeking help to get her two-wheeler repaired, The accused who offered help abducted and raped her before burning her alive.

1.1 ADDITIONAL FEATURES

Providing the safety and security for women at Night times. Live Tracking enhances easy location of the women whenever she is in trouble.

1.2 BLOCK DIAGRAM



2. EXPLANATION OF EACH BLOCK

2.1 RASPBERRY PI



The Broad com BCM2835 SoC used in the first generation Raspberry Pi includes a 700 MHz ARM1176JZF-S processor, Video Core IV graphics processing unit (GPU), and RAM. It has a level 1 (L1) cache of 16 KB and a level 2 (L2) cache of 128 KB. The level 2 cache is used primarily by the GPU. The SoC is stacked underneath the RAM chip, so only its edge is visible. The ARM1176JZ(F)-S is the same CPU used in the original iPhone, although at a higher clock rate, and mated with a much faster GPU.

2.2 SD CARD

This resource explains how to install a Raspberry Pi operating system image on an SD card. You will need another computer with an SD card reader to install the image.

2.3 CAMERA

Pi Camera module is a camera which can be used to take pictures and high definition video.

Raspberry Pi Board has CSI (Camera Serial Interface) interface to which we can attach Pi Camera module directly.

2.4 MICRO USB CABLE

Universal Serial Bus (USB) is an industry standard that establishes specifications for cables and connectors and protocols for connection, communication and power supply between computers, peripheral devices and other computers.

2.5 HDMI CABLE

HDMI 1.0 started off by supporting the ability to transfer a digital video signal (standard or high-definition) with a two-channel audio signal over a single cable, such as between an HDMI equipped DVD player, and TV or video projector.

2.6 PANIC BUTTON

The panic button is the device that the person activates when he or she needs help. There are many styles of panic buttons available. These can have a single pushbutton, two pushbuttons that must be pressed simultaneously, devices that must be squeezed, and devices that are activated by a foot or knee.

2.7 BUZZER

A buzzer or beeper is an audio signaling device, which may be mechanical, electromechanical, or piezoelectric (piezo for short). Typical uses of buzzers and beepers include alarm devices, timers, and confirmation of user input such as a mouse click or keystroke.

3. WORKING

The implementation of the smart gadget is basically split into two sections the first part ensures to capture the image of the Culprit the device get automatically triggered when there is a suspected motion in front of the camera, the device captures the image of the culprit and send it as an attachment to the concerned E-mail Id along with the location of the Victim. The captured image serves as the valid proof against the one who has committed the crime.

4. RESULT



Figure -1: Connections to Raspberry Pi

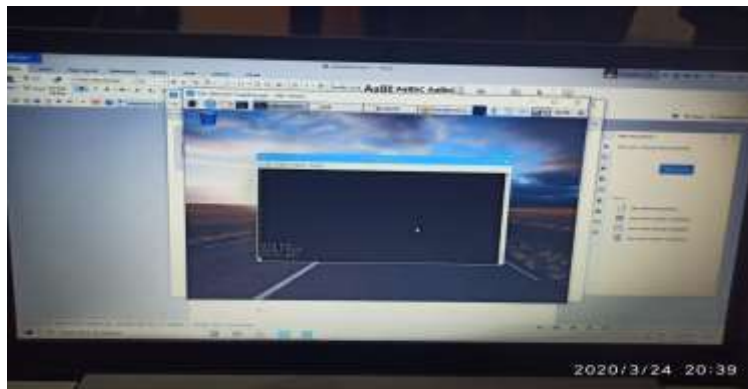


Figure 2- Execution output

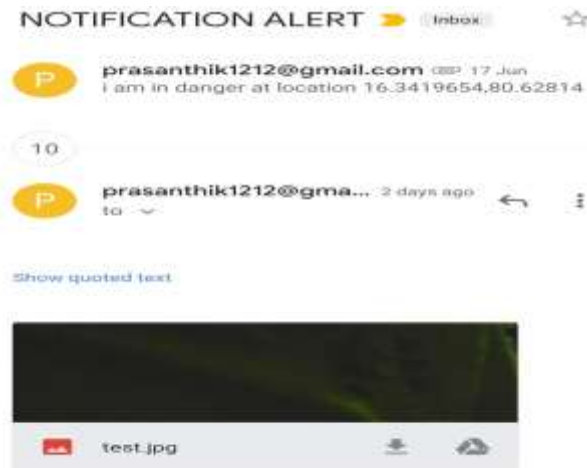


Figure 3- Email sent

Above figure shows execution output, when the panic button is pressed an emergency alert is sent to concerned email along with the location of the victim and also with picture of the attacker. A loud sound is heard by the surrounding people so that they come from rescue.

5. CONCLUSION

Finally, the basic idea is implemented specifically for the women whenever she is in danger.

It can be modified and could also be used in any of the security requirements on scaling of cost and complexity.

6. FUTURE SCOPE

- We can also interface this system with Smart Watch.
- We can use this safety device in Hand Bags, Luggage, Vehicle etc.
- By using Nano size materials, the kit get reduced.

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