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WOMEN PROTECTION AND SECURITY SYSTEM USING RASPBERRY PI

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ABSTRACT: In worldwide situation, the prime inquiry in each woman mind is about her safety and the badgering issues. Women everywhere throughout the world are confronting much deceptive physical provocation. The main idea frequenting each woman is the point at which they will have the capacity to move uninhibitedly in the city even in odd hours without stressing over their security. Our task is a dare to determine this issue. This paper describes about a smart intelligent security system for women. This venture concentrates on a security for women so they will never feel vulnerable. The system comprises of different modules, such as GPS, memory card, stun circuit, buzzer/hooter, sprinkler, Webcam, pulse rate sensor, Raspberry pi-3 module. Today there are many cases which are going on about ladies. It was high time where we women required a change. This task depends on women security where women feel ensured. This venture portrays about safety electronic system for women, worked out in the open transport vehicles such as, car, buses and auto-rickshaws as these days women are being at molested, kidnapped and badgering by the drivers. In each field there is an uncommon effect of women like games, dance, training, business, in legislative issues moreover. Women are driving in each field. The question arises that, Are the women in India are extremely secured? Always we get the answer No..Henceforth executed electronic women security system which has GPS, MEMS sensor, Camera, memory card, Switch which are interfaced with Raspberry pi - 3 board that will track the location of the women also will auto defend in bad situation.

KEYWORDS: Raspberry pi 3 module, GPS, Internet of Things(IoT), MEMS sensor, camera, SD card, Switch.

I. INTRODUCTION

Today in the current worldwide situation, the prime inquiry in each women mind, considering the regularly rising increment of issues on women provocation in later past is for the most part about her wellbeing and security. The main idea frequenting each woman is the point at which they will have the capacity to move uninhibitedly in the city even in odd hours without stressing over their security. This task recommends another

viewpoint to utilize innovation for women safety.This undertaking depends on women security where women feel ensured. This venture portrays about security electronic system for women, worked out in the open transport vehicles, for example, autos, transports and auto-rickshaws as these days ladies are being attacked, kidnapped and harassed by the drivers.As we cannot estimate the happening of incidents but still



one can reduce the chances of sexual abuse, violence, assault by having all safety tools nearby and can easily vanish from the danger situations. This can make a protected domain and furthermore makes a decent help for the casualties. Long range informal communication is an integral part of our lives, any awful occurrences can be insinuated in the blink of an eye to their companions, relatives, control room and so on to get the assistance. We propose a thought which changes the way everybody considers women security. We need the need for a device which automatically senses and rescues the victim is the venture of our idea. In present day India, women have adorned high workplaces in India including that of the President, Prime Minister, Leader of the Opposition and Speaker of the Lok Sabha. Be that as it may, ladies in India keep on facing social difficulties and are often victims of abuse and violent crimes and, as indicated by a worldwide survey directed by Thomson Reuters, India is the fourth most unsafe nation on the planet for ladies, and the most exceedingly bad nation for ladies among the G20 nations. Women are driving in each field. Are the young women in India are extremely secured? Continuously we find the solution No. Consequently, actualized electronic system which has GPS, pulse rate sensor, Camera, Shock circuit, Buzzer/hooter, memory card which are interfaced with Raspberry pi- 3 board to control the majority of the above. The device is the integration of multiple devices, hardware which continuously communicates with Smart phone that has access to the

internet. The application is programmed and loaded with all the required data. This generates a signal which is transmitted to the smart phone. The software or application has access to GPS and Messaging services which is pre-programmed in such a way that whenever it receives emergency signal, it can send help request along with the location co-ordinates to the nearest Police station, relatives and the people in the near radius who have application. This action enables help instantaneously from the Police as well as Public in the near radius who can reach the victim with great accuracy.

II RELATED WORK

Literature review

We as a whole are living in present day India. Everything has changed from devices we utilize, education and Medical facilities that we get, the positions that women are holding however the main thing which has not changed is the picture and security of Indian women. Relatively consistently when we get the morning newspaper, we shudder perusing about the young lady who is physically attacked. This occurs in a nearby shopping center, a stopping or at school. This has occurred with a young lady of 9-10 years, an office running proficient or with 80 year old woman. Numerous terrible episodes have been occurring in women case. Individuals at home don't know of their arrival securely. In 2013, the occurrence in which a 23 year old paramedical understudy was gang-raped by 6 men inside a moving bus close to Delhi region and thrown off the bus is a soul shattering incident that can't even be imagined in dreams. Another incident that has occurred at Mumbai on



account of lady who is abandoning her local place after Christmas occasions has been kidnapped and killed. These are a portion of the issues that have occurred in the everyday existence of women. Although it was a most heinous cases of cruelty, it is unexpected to take note of that such occurrences are not really uncommon in our nation. Overview comes about shows "848 Indian Women Are Harassed, Raped, Killed Every Day!!" That's a route past HUGE number! Likewise there are around more than 25000 bodies of evidence were enrolled against ladies crime and furthermore from the most recent 10 years, the crime against ladies measurements is expanding consistently. There is a noteworthy need of shielding women from disturbances, sexual manhandle, and violence by executing testing system with technological requirement, generally a day when media communicates a greater amount of women' accomplishments instead of harassment, it's an accomplishment accomplished! Since we (people) can't react appropriately in basic circumstances. This worry as a top priority numerous engineers have thought of imaginative applications. Some of such applications in existing systems are: Existing System

1)Codes like *91# is utilized to give crisis administrations, which will alarm police control. Free versatile application 'Help me on mobile' to guarantee safety of women was launched to help the individuals who require crisis. These applications need a single click to do this task. But when a girl is in trouble, there can be times that the girl is not capable of taking the phone and pressing button.

2)SHE (Society Harnessing Equipment): It is an article of clothing inserted with an electronic gadget. This article of clothing has an electric circuit that can produce 3800kV which can help the casualty to get away. In the event of numerous assaults it can send around 80 electric stuns.

3)ILA security: The prime supporters of this system, have planned three individual alerts that can stun and perplex potential aggressors and consequently safeguard the casualty from dangerous circumstances.

4)AESHS (Advanced Electronics System for Human Safety): It is a gadget that helps track the area of the casualty when assaulted utilizing GPS office.

5)VithU application: This is a crisis application started by a famous Indian wrongdoing TV arrangement "Gumrah" circulated on Channel. At the point when the power catch of the Smartphone is squeezed twice successively, it starts sending ready messages with a connection of the area of the client at regular intervals to the contacts.

6)Smart Belt: This framework is composed with a versatile gadget which looks like a typical belt. It comprises of Arduino Board, shouting caution and weight sensors. At the point when the edge of the weight sensor crosses, the gadget will be actuated naturally. The shouting alert unit will be enacted and send sirens asking help.

7)AVR microcontroller based wearable coat for ladies security:-In this mix of wearable coat and portable innovation for women safety in the general public.

8)Smart girls security system:-Year Of Publication:- 2014.

This paper concentrates on a security framework that is planned exclusively to effectively provide security to ladies with the goal that they never feel powerless while confronting such social difficulties. The framework comprises of different modules, such as, GSM shield (SIM 900A), Arduino, ATmega328 board, GPS (GYGPS6MV2), shouting alert (APR 9600), an arrangement of weight sensors for actuation and power supply unit.

9) Women Employee Security System utilizing GPS and GSM Based Vehicle Tracking:-Year Of Publication:- 2015 This paper concentrates on the proposed show that can be utilized to manage the issue of security issues of ladies representatives utilizing GPS and GSM based vehicle following.

10) A Mobile Based Women Safety Application:-Year Of Publication 2015 The principle downside of these applications and administrations is that the underlying activity must be activated by the casualty which frequently in circumstance like these doesn't occur. So the accentuation is to assemble an answer that works self-rulingly in circumstances experienced. This are all existing system worked but this have some limitations. To overcome the limitations of existing system, we are proposing an IoT based women tracking and security with auto defender system.

III. PROPOSED SYSTEM

In this system there are majorly the following sections shown in block diagram

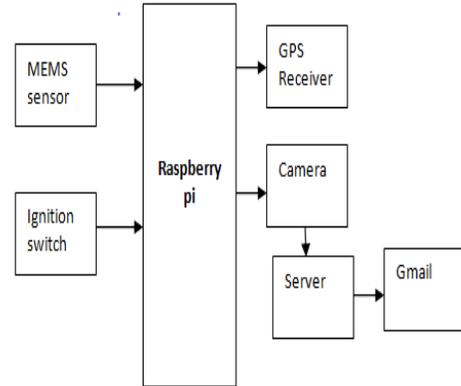


Figure 3.1 Block diagram of women tracking and security with auto defender system

The IoT based system consist of the main part is Raspberry pi module gets the signs from GPS system which has introduce area data and after that the Raspberry pi controller permits to send the Alert Message with the location of the women to the saved predefined numbers. At the time of dangerous situation, we know that everyone's pulse rate get high, hence we are using a pulse rate sensor that will sense the heart rate and send through message with the location. A camera utilized for the capturing picture of an attacker and outside memory card is utilized for the capturing picture is save on this card and send to the receiver so that police can catch an attacker and punish him. At the same time when she presses a button, automatically the auto defender system will start working. Auto defender system is consisting of the buzzer which will make sound so that someone in the surrounding can listen and help her, second is shock mechanism which will stun the attacker, third is the sprinkler that will sprinkler the harmful, etching solvent like

pepper powder which will harm an attacker and still she gets help. Thus the women can self defence her.

IV. CONCLUSION

This paper IoT based Women tracking and security with auto defender system using Raspberry Pi 3 module is not only consisting of the tracking & message sending to police, family member, friends but also it will auto defence in insecure situations and then capture the photo of attacker to catch him and punish. Also the MEMS sensor senses and will send to receiver via message with GPS location. The auto defender system consisting of a camera to capture image, and that image will sent to the authorized email which is respected to write on Python code.

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