

SURVEY ON WOMEN SAFETY DEVICES

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Abstract - Today in the current global scenario, women feel less secure to go outside. They are facing so many consequences in this independent world. Here, we are focusing on a scenario where the women walking alone in the road faces harassment either from the front or backside during day or night time. To overcome these issues, we have developed a smart portable device which can track the current location of the victim. When they feel insecure, their heartbeat increases which can be measured by the pulse sensor and their stress level is monitored and women may be able to convey the misery message through our smart device to the trusted contacts and the cops. Such smart security devices can give quick responses for emergencies and prevent women from potentially shocking experiences. In addition to this, we can monitor certain parameters like hemoglobin level of blood, the oxygen level in the blood, pulse rate, stress. The main advantage of this device is small and easy to carry. The use of sophisticated components in this device gives more accuracy and it is more reliable. We are looking for the day where every woman can walk independently on the road.

Key Words: Node MCU, GPS, Pulse Oximetry sensor, alert system.

1. INTRODUCTION

In the modern world, most of the women are in working in order to stand by their own. Unfortunately, due to security issues not only women even the girl children in the world are facing lot of problem in their day to day life. However, the safety and security of women and children in the country is the utmost priority for the Government and its a responsibility of each and every individual to provide a safer environment to the women. In the recent days, the educated women are supposed to work in a different environment and surrounding and also way from their native. So, being safer is becoming a vital problem for the working women. Now a day's women are committing with men in each and every domain to show their ability. As we all know that the mental ability of the women is comparatively very when compared to the men still, most of the women are having fear of going out due to the women harassment and it is going in increasing manner. The Government is also taking necessary action like Kavalan mobile application to reduce these cases but it is the responsibility of every citizen to ensure the safer environment to the women and every woman should have

an awareness regarding these issues to save themselves during those situations. In these days the technology developing sharply in day by day and many people are providing a solution to this problem in their own using the developed technology. In this paper, the survey on those solutions are discussed in order to provide a better solution to eradicate this issue in our nation. It is time to provide a save world to the women. The women should carry a device with them while going out for work to track them when they are outside. The devices which already designed are like an accessory to carry with them. The provided solution is discussed to give a more effective and better solution for this issue.

2. LITERATURE REVIEW

Sutar Megha et al ^[1], The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 is a legislative act in India that seeks to protect women from sexual harassment at their place of work. Today women are playing an important role as a president, prime minister, speaker of the Lok Sabha and even in the field of aeronautics, military, IPS, IAS, etc. Even today women have achieved top positions in job and society, yet they are facing problems such as physical harassment and the sexual assault. The cases of harassment and rapes on women are increasing hence security issue for such woman is more important. So, it is essential to develop a system to provide security to women. In this he devised a system allows women to protect themselves from attackers. In recent days the attacks on women are increasing and sometimes they are not even able to take their mobile and dial-up to police, this system will help women in such situations to inform about attacks and also in giving their exact location to a nearby police station for necessary action. In this, the author designed a device, in that, by pressing the button of the device a message along with her location will be transmitted by the system to the police station and her few relatives, so that they will get aware of her current situation. He told that with that message she is also for their defensive purpose they can able to give a shock to the attacker it will be more helpful to women at that critical situation, this system is designed as the defence equipment, it will them to attack the attacker. So, she has some time to rescue herself from that attacker.

In this paper, the author proposed a device consists of LPC controller, GPS, ARM controller, GSM and shock circuit. Women under a dangerous situation can press the emergency button. So that, the location along with the helping message can be transferred to the emergency number. In addition, shock circuit is activated and the generated current shock can be imposed to the attacker. In this the Shock circuit can be operated by driving and isolator circuit. By these, any women can protect them from situations that can harm them.

Anup CJ et al [2], The amount of violence against women has increased by many folds due to the greater exposure of women in every field of life. Women were previously restricted to the four walls of the houses and after globalization, they have got the chances and opportunities to stand equally in all sectors at compare with male. Women are now a day's cab drivers and they are also the CEO of top companies. It is a good sign that the patriarchal mindset of the society has changed to some extent but not to the extent it was supposed to. It is the same mindset that restricts women to go out and work making them as a tool for domestication. It is the same mindset that treats males as superior than female and always try to dominate the womenfolk. There are different kinds of tools that are being used by the male-dominated society to prove their domination over the female. Eve teasing, sexual harassment, rape, domestic violence against women are these weapons used by the male to display the male superiority. This is one of the prime reason violence is increasing in India and women safety is a concern in India.

In this paper, the author supposed to told a remedy to safeguard women from these situations by designing a gadget like a typical belt. This design consisting of GPS, GSM, Zapper, Buzzer circuit. When women feel unsecured, they can use the gadget which is having an emergency button. Controller in that activates the GPS, GSM in order to identify the location and to transfer the misery message to the trusted people and to the control room during the time of the attack with their exact location. Zapper circuit produce shock which has high voltage to give a non-deadly stun to the aggressor. Buzzer also gets activated which produces boisterous yelling sound to get nearby individuals for help. Hence, they are escaped from the danger.

Shreyaasha chaudury et al [3], Safety of Women in India has become a major issue in India now. The crime rates against women in the country have only risen to a great extent. Women think twice before stepping out of their homes, especially at night. This is, unfortunately, the sad reality of our country that lives in constant fear. Women in India have been given equal rights as men; however, people do not follow this rule. They contribute to the growth and development of our country; still, they are living in fear. Women are now on respected positions in the country, but if we take a look behind the curtains, we see even then they are being exploited. Each day we read about horrific crimes being

committed against women in our country. In our daily life, where you don't hear the news of a crime against women in India. In fact, there are at least five news articles that tell us about the horrific details of the various crimes. It is extremely painful to watch the status of women's safety in India, especially in a country where women are given the stature of goddesses. To avoid situations like this, in this the author designed a device with a sensor called IoT to protect women from danger

In this paper, the author proposed an IoT (Internet of thing) based women safety device which connects devices to the internet using sensors and a suitable platform. This IOT sensor is placed on the health monitoring equipment's to monitor the patient's health condition. This monitors the status of the patient and sent to the doctor if they are in need of treatment. By this way, it is useful for the doctors and it avoids the risk in the patient's life.

snehal Lokesh et al [4], Violence against women and girls does not discriminate by race, religion, culture, class or country. Worldwide, one in three women have experienced either physical and/or sexual violence, and more than 15 million girls aged 15-19 years have experienced rape. Conflict and displacement only heighten the problem. As girls and women lose their support systems and homes, are placed in insecure environments and in new roles, their risk of gender-based violence (GBV), including sexual violence, intimate partner violence and child abuse increases day by day. Areas like streets, public spaces, public transport, etc. have been the territory of women hunters. Every day and every minute some women of all walks of life (a mother, a sister, a wife, young girls, and girl baby children) are getting harassed, molested, assaulted, and violated at various places all over the country.

In this paper, the author proposed a system consist of android application, main device, and portable camera. Android application uses Phone GPS or GPS of the main device to locate the victim in the critical situation they were pressing the emergency button. The camera will be added through the photo will be captured and it will be sent to the server with ensure the data security, Main device is also attached with manually operating in pepper spray.

Swati Sharma et al [5], safety for women become a matter of concern with the violence against the women will increases, in this system the GPS tracking and messaging system plays an important role. When women are going to travel somewhere for long distances at night time the GPS used as a GPRS location while travelling in the cab would be accessible and simultaneously her location will be immediately sent to their relative for their rescue. The main purpose of designing such a project is that we will make small, handy equipment, which could be kept in a purse. This equipment will be having a panic switch and as soon as the panic switch is pressed, the location coordinates provided by the GPS to the emergency. The panic switch is very small and it will easily

handle with safe and secure from others and that is an easy way to do this. While press that switch an emergency/alert message about the victim location gets shared to the police control room and will be informed through the ease of the website.

In this paper, the author proposed a system which is designed with a small handy equipment which could be kept in the purse, when they are in the critical situation the button available in this device can be pressed and their location can be tracked by the police control room and their family members through the website.

Junaid Mohammed et al [6] this paper is built on the android app based on their mobile application for the health monitoring. They developed an application called ECG android app, which provides the user with the visualization of their Electro Cardiogram (ECG). waves and the data logging functionality in the background, the sorted data can be upload in the Wi-Fi cloud, which monitors the records of the future analysis for the person, by this idea will develop an internet of things and cloud techniques. The IOIO microcontroller, signal processing, communication protocols, secure and efficient mechanism of large file transfer, database management system and the cloud. ECG waves visualization on the Android App. The ECG waves were plotted by the data transmitted from the sensors on the IOIO microcontroller via Bluetooth technology. ECG data logging on the Android App: The large amount of data received from the IOIO microcontroller is covered to a binary file which would contain all the data received and this file would be stored on the SD card of the mobile phone. This feature improves the performance and scalability. An Upload Service: The service uploads the files on the SD card of a device to a private centralized cloud using an FTPES secure server. The transfer of the file takes place using File Transfer Protocol over the Internet Protocol. We have developed the ability to store unstructured data on a File system without causing any form of latency within the database using filletable and File stream technology in Microsoft SQL Server 2012. Multiple devices can pass ECG data to the server at the same time as the cloud has multi-user and multi-device support. File Compression and Security. The medical data is stored in a binary format which would be encrypted and uploaded to the cloud in a secure manner using FTPES protocol. The format is optimized for compact storage and faster byte parsing on the cloud which is later used for visualization with MATLAB or any signal processing software.

In this paper, the author's proposed a system to monitors patient, ECG wave anywhere in the world using IOIO-OTG Microcontroller. For monitoring ECG, an Android application has been developed for the quick access. IOIO-OTG microcontroller is connected to android phone using USB cable. Using that android application, the collected data or ECG wave can be monitored and stored.

3. CONCLUSION

In all these papers, the authors have approached different ideas in their aspect to give a solution to the women safety. As we are giving the solution on women safety. The monitor the stress level of the women to protect them from the critical situation. The existing system is designed with an emergency button that may fail sometime. But the designed system will not fail during those panic conditions. Because the alert will be given automatically after a few minutes. It will help to prevent those situations even during their panic state. The proposed system developed from the existing smartwatches for women safety and their health monitor. So, the victim can be tracked easily even when women loses consciousness. This system can overcome the fear of women from harassment.

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