

Women Safety for Leg Disabled Women

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Abstract: Women safety is an essential issue due to the rising crimes against women these days. To help resolve this issue we propose a GPS based women safety system that has dual security features. This device can not just be used by women when in distress but also by children when their travel modes are sans elders. For elderly people with issues like Alzheimer's this device can turn out to be very useful for them as well as their families. This device sends the current location of the woman/child/elderly to the family members and concerned authorities in case of any harassment faced or if in any sort of trouble. The device also has a panic button which is an in-built 400kV electric shock generator, which upon pressing will knock the assaulter down due to a sudden shock but without any fatality. The device is made using an AVR microcontroller, a GPS module, a GSM module and a high voltage generator.

Keywords: Women safety.

I. INTRODUCTION

Women and Child Safety Device using GPS and Electric Taser, is designed to be a compact low power device, easy to carry and that could fit in anywhere. The primary goal of this project is to enhance the safety of women, children and elderly people.

This device has been designed for both safety as well as for self defense in case of emergency. This device is designed to have two buttons, a panic button and a taser button. In case of an emergency the panic button should be pressed due to which a SOS message with current location will be sent to the family members and concerned authorities. The SOS message will repeatedly be sent at time intervals of 5-10 seconds until help is sought .

On pressing the other button, the taser button, a high voltage electric shock generator will be activated, which produces a high voltage of up to 400 kV, which immobilizes the assaulter for a few minutes, and since the current is less, it wouldn't prove to be fatal to the assaulter.

The fact that the device is of light weight and compact, it can easily be carried in a purse or in the soles of shoes or heels. Given proper training to children and the elderly on using the device, they can carry the device in their school bags or pockets as well. The low cost of the device makes it suitable for women all around the country to afford buying the device and travel without any fear.

II. LITERATURE SURVEY

The purpose of this literature survey is to study the Women safety Device and its drawbacks. To know more about the alternative solutions that are implemented instead of our proposed model related literature review and to get the knowledge about the different technologies that are implemented to design a system.

[1] Women Safety System Design and Hardware

Implementation: Satyam Tayal; Harsh Pallav Govind Rao; Abhimat Gupta; Aditya Choudhary in 2021. In modern life, women safety is an alarming issue. When travelling in lonely areas, women are vulnerable to different threats, eve teasing and harassments. This makes them feel helpless. In this paper, a simple and cost-effective women safety device design and hardware implementation using NodeMCU, GSM, and GPS modules is proposed. In the event of any danger sensed by a woman, a push button is to be pressed by her on this safety device. In this scenario, GPS quickly tracks the women's location and an emergency message is being sent by GSM module to saved contacts and nearby police control room. Further, the buzzer to alert the nearby people to help the women. Thus, raises an alarm, complete protection of women is ensured. [2] Arduino based Rescue device with GPS Alert for Women Safety Application: Navya Ananthula;

T Rajeshwari; B. Mounika; P.A. Harsha Vardhini; B. Kalyani in 2022. In today's world both men and women are having

equal responsibility in their work fields. Women face challenges in the workplace and safety become a major issue. Increase of issues like sexual harassment is most often happening in frequent. The thought haunting in women mind is how to move freely in streets during the odd hours. Women's safety plays a very vital role due to rising crimes against women. This, paper suggests a new perspective to use technology for women safety. To help resolve this issue we propose a GPS based women's safety system that has dual security feature, consists of dual-alerts that is voice module and message is sent through GSM. It can be turned on by a woman, even she thinks that she's in trouble. The device can be interconnected with the alarm system and alert the neighbors. The detection and messaging system is composed of a GPS receiver, GPS Receiver gets the location information from satellites in the form of latitude and longitude. The user receives the information from GSM which receives the processed information from the Micro controller. A GSM modem is interfaced to the MCU. The GSM modem sends an SMS to the predefined mobile number. When a woman is in danger and in need of self-defense then she can press the button, which is allotted to her. By pressing the button, the entire system will be activated then immediately a SMS will be sent to concern person with location using GSM and GPS. [3] Women's Safety with a Smart Foot Device: S. Pravinth Raja; S. Sheeba Rachel; Sapna R in 2021. hunter's dominance. A smart safety footwear aimed at womenfolk grounded on the Internet of Things was suggested because of these crimes happening in the current scenario. This is realized with the usage of a smart IoT device. This smart gadget can be fixed into the footwear well as it shall be activated invisibly. A button, a Microcontroller board, GPS, GSM, and a buzzer are all part of the smart wearable device. An alert is activated by tapping one foot behind the other thrice. This permits the GSM and GPS to direct a message to pre-configured numbers such as a guardian or police department. The findings were analyzed using a decision tree classifier, which revealed that this low-cost gadget had substantially greater reliability. [4] Design of Low-Cost Women Safety System using GPS and GSM. Deepanshu Tanwar; Vaibhav Nijhawan; Pragya Sinha; Rashi Gupta in 2021. In 2019, India recorded an overall 4,05,861 cases of crime against women, it was a rise of 7% from 2018. In 2019 total of 32,033 cases of rape were lodged, which was 7.3% of all crimes against women [18]. Data shows that the crime rate registered per lakh women population increased from 58.8 in 2018 to 62.4 in 2019 [18] [20]. There are many problems like sexual harassment, domestic violence, eve-teasing that are being faced by women. Sometimes victims don't have proof to prove to mishappen [20]. We proposed a device which will send an SMS to the registered mobile numbers when a button is pressed or when the women fall and save voice recording of that situation as proof. There are two separate parts in our proposed model, first is a transmitter which will be on the wrist and the other is a receiver part which contains Arduino UNO interfaced with SIM900A GSM module, NEO6M GPS module [15], RF TRANSMITTER AND RECEIVER module, BUZZER, MPU6050 (accelerometer) and ISD1820 (voice recorder) which will be fit on the jacket. When either a button is pressed from transmitter or MPU6050 (accelerometer) detects any fall, second part got activated and an emergency message will be sent with the current latitude and longitude, the buzzer will make a loud sound to get the attention of nearby people for quick help and ISD1820 (voice recorder) start recording voice as a proof. [5] Smart Wearable Device for Women Safety Using IoT: V. Hyndavi; N. Sai Nikhita; S. Rakesh Many of the patients who are suffering from memory loss requires a special ha in 2020. The crimes against women have been rising significantly and often hear about molestation, eve-teasing and rape cases in the public places of the society. The security of women is the most important concern these days and to build a safety device to act as a rescue and to prevent from harm at the time of hazard is highly necessary especially for women. In this paper, a smart device for women's safety which automates the emergency alert system by using pressure sensor, pulse-rate sensor and temperature sensor to detect a possible atrocity automatically using outlier detection is proposed. This system detects and sends the alerts for the dear ones with the location coordinates of the women without the requirement of her interaction in critical times. It sends an emergency message automatically to the relatives and nearby police station.

III. SUMMARY OF THE LITERATURE SURVEY

The outcome for the literature survey are as follows

- This method consists of a system that provides physical security in the case when the women are harassed or whether she is in trouble.
- In this paper, we proposed an ATMEGA controller and an android application in which both the device and mobile phone are synchronized using the ESP module.

- This paper will prove to be very useful in saving lives as well as preventing atrocities against women.
- This system uses a panic key, a boost converter and a GPS module which provides the location of a woman who is in trouble and the stun gun technology which will provide physical protection to the women.
- If the panic key is pressed, it turns on the system by sending an alert message to the woman’s relatives via android application.

IV. METHODOLOGY

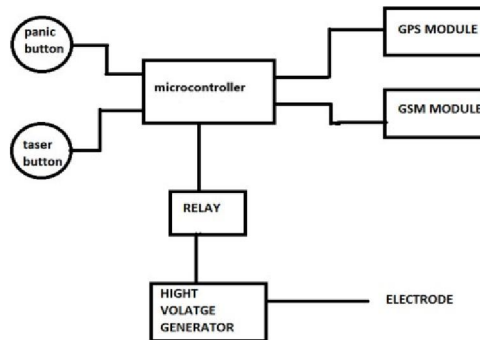


Fig 1. Block diagram of “Women safety device”

The block diagram of “Women safety device”. We propose a smart device which is portable and easy to carry .The brain of this device is the AVR microcontroller that is used. The GPS module is connected to the microcontroller using the serial port. A GSM module is connected to the micro controller through the software serial port.

There are two buttons which are connected to the microcontroller. The panic button and the taser button. On pressing the panic button, the microcontroller will extract the current location of the user using the GPS module, the location will be sent to recipient numbers (family/authorities) using the GSM module. We can add as many recipient numbers as we want. A SOS message will be sent simultaneously to all the numbers added once every 5-10 seconds. On pressing the taser button, the micro controller will turn on the relay, which will turn on the high voltage electric generator. The output of the high voltage generator is 400kv. This generates a shock to the assaulter which will knock down the assaulter for a couple of minutes without any fatality.

V. RESULTS AND DISCUSSIONS

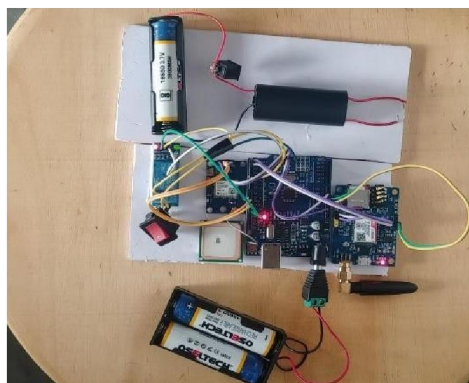


Fig 2. Proposed Model of “Women safety Device”

VI. RESULT ANALYSIS

Methodology refers to the overarching strategy of Live location tracking technology. It involves studying the methods used in tracking and the theories or principles behind them, in order to develop an approach that matches proposed model objectives. It comprises the both hardware and software components required to the model. design details of our project as shown above Extracting the current location of the women using GPS module and the extracted location is sent to concerned parents or authority using GSM module.

VII. CONCLUSION

In conclusion, a self defense unit for disabled women can be a valuable resource for empowering and protecting this vulnerable population. The unit should take into consideration the specific needs and abilities of the disabled women it serves, offering customized training and tools to help them defend themselves in dangerous situations.

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