Futuristic Access for Women Safety

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Abstract: Women safety in India is widely discussed everywhere nowadays. It has now become a major issue. The crime rate is on the spike. Women are neither safe outside nor at home. In India domestic abuse, sexual assault and murder are common forms of violence against women. The rate of domestic violence is increasing in India. 70% of women are victims of domestic violence. It leads to depression and suicides. Our paper is mainly designed to help the victim at the time of danger. Once the woman shouts like "HELP ME..." then the voice is recognized and there will be a transfer of danger message to the registered phone numbers with the exact location. And the location is stored and updated in the cloud through IOT. In additional to that it has a Neuro stimulator which will provide shock to the opponent at the danger time.

Keywords: Arduino Mega, IOT, Neuro Stimulator, GSM, GPS, voice module

I. INTRODUCTION

Women are the most integral part of any economy primarily responsible to shape the future of the country. Security for women has become a major issue in most of the countries. Many crimes against them are not being reported because of society's hypocritical point of view. Various types of humiliations and mistreatment are being faced by the victims who try to report their assaults from society. Survey results shows that every year around 25000 crime against women were booked across India. From the last ten years, the statistics among women abusement, sexual harassment have been steadily increasing. It has become mandatory to come up with a solution to protect the women from being a victim and to reduce the attacks. The main objective of our project is to design a device which will help the victim when they are in danger.

II. LITERATURE SURVEY

Smart Wearable Device for Women Safety Using IoT: 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. [1]

Smart Intelligent System for Women and Child Security: This paper surveys about the security system for women and children which allows immediate responses in any harassment in public places, societies etc. Women all over the world are facing unethical physical harassment and Children cannot be left unattended at a social event or outside the home. Our project solves both the problems. A portable device which will have a pressure switch. As soon as an assailant is about to attack the women/child or when they senses any insecurity from a stranger, he/she can then put pressure on the device by squeezing or compressing it. Instantly the pressure sensor senses this pressure and a conventional SMS, with the victim's location will be sent to their parents/guardians cell phone numbers stored in the device while purchasing it, followed by a call. If the call is unanswered for a prolonged time, a call will be redirected to the police and the same message will be sent. The main feature of our system is less response time will be required for helping the victim. [2]

III. PROPOSED SYSTEM

The System proposed here is built by using embedded system and IOT. In this system, we use Arduino MEGA for this system which is the brain of our system, because the entire system program instruction stored in it. The voice recognition module is used to identify the voice like "emergency" or "help" and the data is transmitted to Arduino

MEGA even women can manually trigger the device to notice other that she is at an emergency situation. The GPS module which we use here to know the exact location of the person. The GSM can send message to desired person whom the women want to. The system has Neuro Stimulator to attack back all though we have also used an alarm device to let others know about the emergency situation. All the data fetched are updated to cloud through IOT.
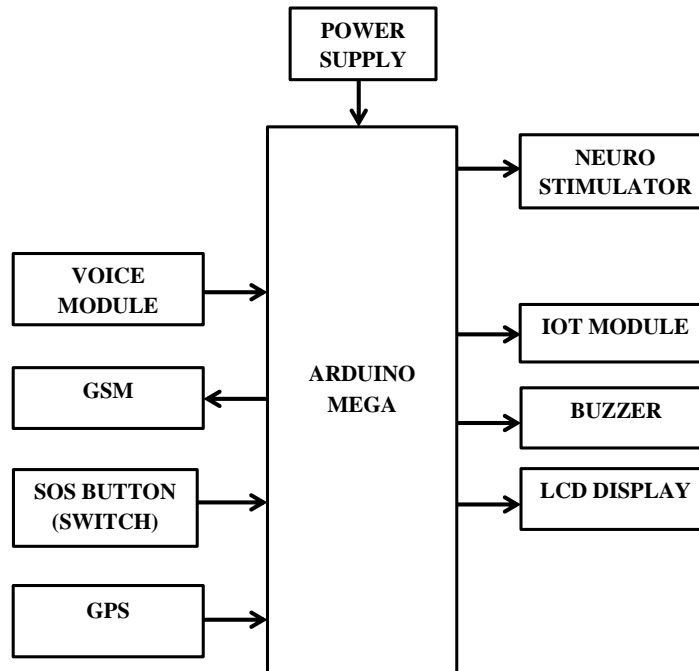
IV. BLOCK DIAGRAM

Fig 1. Block Diagram

A. The Arduino Mega 2560 ia a microcontroller with 54 digital input/ output pins, 16 nalog inputs, 4 hardware ports , a 16 MHz crystal oscillator and there is also USB connection port, a power jack and a reset button

Fig 2. Arduino MEGA board

B. The Liquid crystal display is an electronic display module which we used to display the output

Fig 3.LCD Board

C. GSM Module is an open and digital cellular technology used for transmitting mobile voice and data services operate at the 850MHz, 900MHz, 1800MHz, and 1900MHz frequency bands.
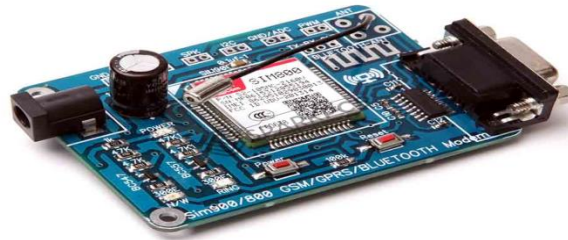
Fig 4. GSM Module

D. Voice Recognition Module It extracts and analyses **voice** features of human delivered to a machine or computer through the mic.
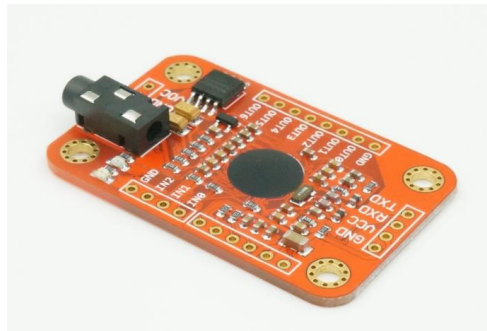
Fig 5. Voice Recognition Module

E. GLOBAL POSITIONING SYSTEM (GPS) is the only system today able to show you your exact position on the Earth anytime, in any weather, anywhere.

Fig 6. GPS Module

F. Neuro Stimulator, it delivers mild electric signals to the epidural space near your spine through one or more thin wires, called leads.

Fig 7. Neuro Stimulator

V. FLOWCHART OF PROPOSED SYSTEM
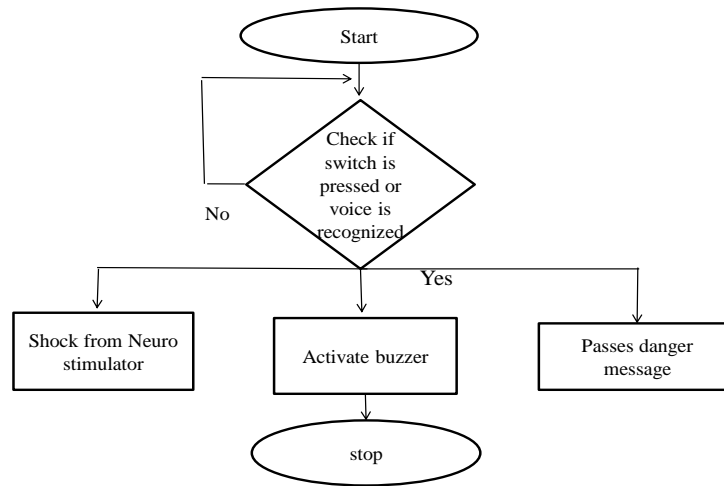
Fig 8. Flow chart

VI. RESULT
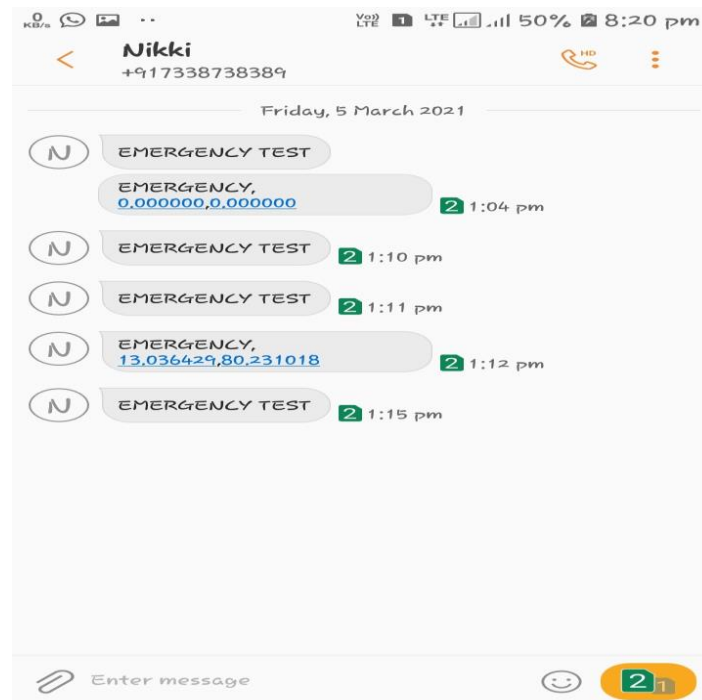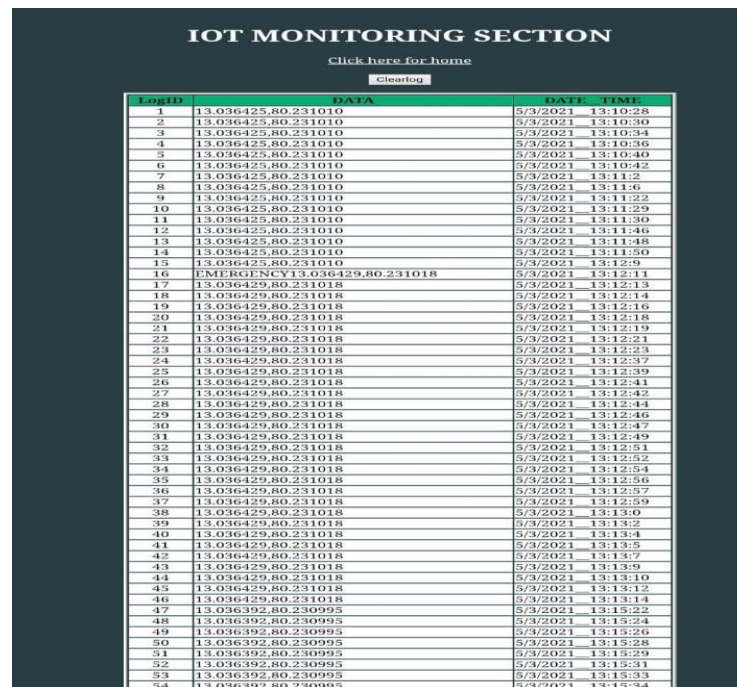
Fig 9. Emergency Message sent to the registered mobile number

Fig 10. Location uploaded at cloud with emergency message

VII. CONCLUSION

The main purpose of building a woman safety device is to act as a rescue and prevent any harm at the time of hazard especially for women. Through the proposed system a smart device for women's safety which automates the emergency alert system is designed. 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 once the victim's voice is detected. The prototype is suitable to carry in any type of bags such as handbags and laptop bags. Carrying the prototype in these bags is suggested because even the person who is trying to harm may not notice the device inside the bag. Through the process of customization, this prototype can be modified to wearable like smart watches, bracelets, necklace etc.

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