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SECURING THE NATIONAL PRIDE (WOMEN SAFETY) BY USING IoT

K.Gayathry[1], K.MahaLakshmi[2], B.Monisha Reeta[3], V.Nandhini[4], N.Mangaiyarkarasi[5]
[1,2,3,4]Students, Kings College of Engineering
[5]Assistant Professor, Kings College of Engineering

ABSTRACT

Women's security is a problematic thing in today's world and it's essential for every individual to be acting over such an issue. In today's world there is no assurance for the safety of women, they are facing more number of circumstances like abductions, sexual pestering, & physical attack. Because of these reasons women's can't step outside. The crucial query in the mind of every women taking into account is the increase of problems on women pestering in the past, is only about their secured life. The only thing lingering every Women is when they feel free to move on without perturbing about their security even in night hours. When they are having any device in that particular situation they could not feel insecure. In most of the existing systems, they came with smart devices but it will be useful to send the location. With the aid of our proposed system girls & women could stay out without any fear at any time. The system consists of PIC Microcontroller, IoT, PC and Sensors (heart beat sensor, temperature sensor, connectivity sensor, PIR sensor), vibration motor, spray bottle and make use of wireless communication devices. This scheme can be used at any locations like bus stops, railway stations, footpaths, shopping malls, markets, etc. This project aims on Women's Safety system which is useful for women after sent their location details. By using special sensor the controller will activate the whole device to safeguard themselves.

Key words - PIC microcontroller, Sensors , GPS module, PC, IoT.

I. INTRODUCTION

In today's strategy status of women in India has been going with various fluctuations over few historical eras. The equal right to women was promoted by many agitators from the prehistoric period. In India, currently women have been decked out great organizations comprising that of the commander, head of the state, frontrunner of the opponent and many speakers. Most probably, women in India pursue to handle many communal disputes and are frequent fatalities of abuse and ferociously breaking the laws. According to a global poll conducted by Thomson Reuters, India is the "fourth most unsafe nation" in the world for women and the vilest nation for women among the G20 nations.
In spite women are achieving many things in the world they struggle for their secure life.

In 2018 SSH commissioned 2000- person national representative survey on sexual pestering and attack, conducted by GFK. It found that over National wide, a report on 81% of women and 43% of men experiencing some form of sexual pestering and/ or physical attack in their time was submitted.
While verbal sexual pestering is the most common thing (74% of women and 34% of men) a terrifying 51% of women and 17% of men said that they were touched or felt in an unwanted way and 27% of women and 7% of men lived with fear of sexual attack. So it is significant to preserve themselves from this horrible society.

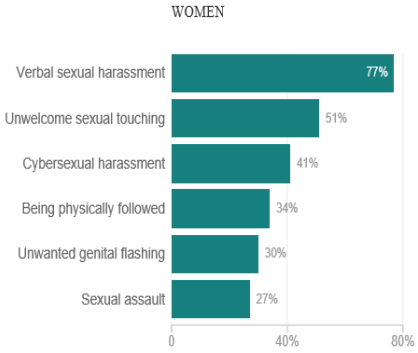

FIG 1.1: Statistical view of women harassment in 2018

II. EXISTING SYSTEM

In most of the existing system, they developed smart devices (watch, band) which sense alert message via Bluetooth. Later they send messages via GPS to an application on their parents and guardians phone. In this way they can only got location of the unsafe women.

DEMERITS

(i) There is no precaution method.
(ii) Arrival of parents/guardians at that moment is not sure.
(iii) No guarantee for the safety of women.

III. PROPOSED SYSTEM

In our proposed system, When you identify the person in front of you is a horrible person your pulse rate and temperature will increase from normal. At that time we suggested to use connectivity sensor just place it on your tongue then latitude and longitude information will send to parents or police station through GPS to an application. Before anyone arrives to that place to safeguard the women from that person our microcontroller will ON the vibration motor based on the timer. It provides the vibration to the person who is drunk when he tries to touch the women.

Otherwise if the person is normal one who tries to harass her, then PIR sensor will activate and confirm the presence of person in front of her. Based on the timer setting sprayer will automatically spray a rotten egg smell on her body, so that person can easily relieve from the women. By using RF in 433MHZ the surrounding wireless communication devices will be automatically activated. That provides alarm like sound so that public can alert.

IV. BLOCK DIAGRAM

WEARING UNIT

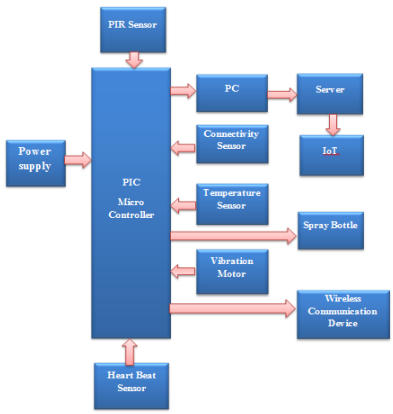

FIG 4.1: Block Diagram

RESCUE UNIT

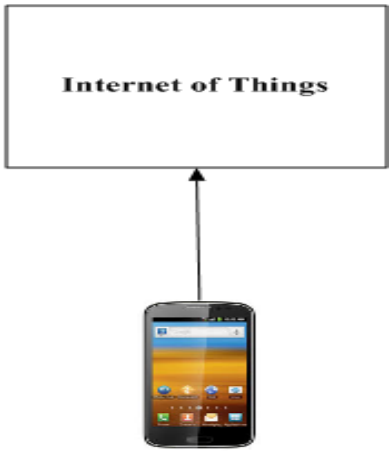

FIG 4.2: Rescue Unit

V. HARDWARE DESCRIPTION

1. TEMPERATURE SENSOR AND HEART BEAT SENSOR

Our body normal temperature is 98.6 F and our normal heart beat is 72 per minute. When the women identify the horrible person these normal ranges will increase. Our microcontroller will store the values and will not send any alert message. At that particular time they have to use the connectivity sensor.

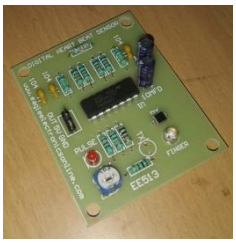

FIG: 5.1 Heart beat sensor

FIG: 5.2 Temperature Sensor

2. CONNECTIVITY SENSOR

When the women or children are in the harassment situation, if they just place the connectivity sensor on the tongue to moisturize it then the sensed temperature and heartbeat values will compared to the normal values, if that compared values are higher than the normal range then the location of women/children will send through the application to their parents or nearby police station.

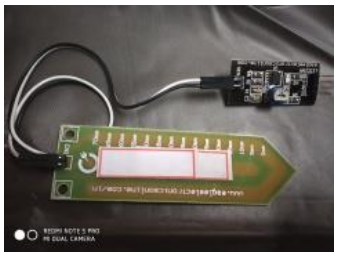

FIG 5.2 Connectivity sensor

3. VIBRATION MOTOR

It works on 5v DC at 200 RPM for providing vibration to the opposite person who is in unconscious state when he tries to touch. The women can safeguard herself by simply showing the device where they wore.

FIG 5.3 Vibration Motor

4. PIR SENSOR

This sensor detects the motion of the person in front of the women. His presence will be send through GPS to an application.

FIG: 4.1 PIR Sensor

5. SPRAY BOTTLE

The spray bottle will be activated by 230v AC. It will spray on women's body automatically which provides a bad smell so that the person can avoid her.

6. WIRELESS COMMUNICATION DEVICE

The transmitter in the Micro controller can communicate with the receiver in the surrounding wireless communication devices through 433MHZ RF for activating the alarm to alert the helping minds.

FIG : 5.6.1 Transmitter

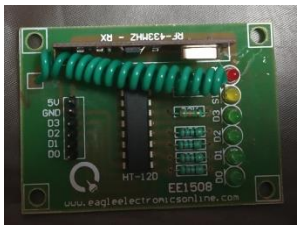

FIG: 5.6.2 Receiver

7. GPS

GPS is a device that is accomplished to collect information from GPS satellites and then to estimate the device's geographical location by get through appropriate software the device may exhibit the position on map. It can recover information about location and time in all the weather circumstances wherever in the Earth.

FIG: 7.1 GPS module

8. IoT

IoT make chance for shortest integration of world into computer based systems, causing competent developments, economic benefits and minimize human effort. IoT allows things such as electronics, sensors, software to connect, interact and exchange the data. It extends the internet connection beyond the standard devices.

VI. CONCLUSION

This paper comes out with an inventive approach for security and protection of women with competent device. This system can overcome fear and make women to be bold in facing all situations in their life. It will help to safeguard themselves after sending message with location through GPS to an application which is helpful for women security before the reach of help minded people to that landmark.

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