**NEUROSTIMULATOR AND WOMEN SAFETY SYSTEM TWO SWITCHING STATE BETWEEN THE PALPITATION METHODOLOGY**

**ABSTRACT:**

Ensuring women’s safety in smart cities is a need of the hour. Even though several legal and technological steps are adopted worldwide, women’s safety continues to be an international concern Criminal records are maintained by law enforcement agencies and are most often not available to the public in an easily comprehensible form. While some wearable devices and mobile applications are available which are touted to aid in ensuring women’s safety, they utilize limited societal intervention and are not very efﬁcient in ensuring the safety of the women as and when required. This work applies the Geographic Positioning System (GPS) for the identiﬁcation of location of women and it intimates to the nearer police stations and alert the public by using buzzer. The nerve stimulator generates an electric shock pulses which helps to safe guard from criminals.

**KEY WORDS:** WOMEN PALPITATION, RF SIGNAL COMMUNICATION, IOT.

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| **EXISTING METHOD** | **PROPOSED METHOD** |
| 1. In Existing method, there is no women safety device with nerve stimulator. 2. There is no option for enhancing the safety system based palpitation. 3. There is no three layer communication device for alert system.   **DRAWBACKS**   1. Single alert system leads to lesser communication and dangerous for women. 2. Slow response. 3. Data losses occur. | 1. In proposed method, the safety measures are improved by adding three layer communication alert system. 2. We can provide the two switching option for safety enhancement system based on user preference. 3. Palpitation method to detect the emergency situation without any user input.   **ADVANTAGES**   1. Multiple alert systems provide higher possibility to send the data properly. 2. Faster response. 3. No chance for data loss. |

**WORKING PRINCIPLE**

The ARDUINO MEGA microcontroller is used in this proposed method to interface a multiple input and output devices. The LCD is used to display the current execution process. The toggle switch is used to manual (push button) and automatic (heart rate sensor) alert switching by the women. The push button is used to send the alert message manual pressing. The heart rate sensor is used to detect the palpitation level of the women then automatically send the alert. The nerve stimulator is used to provide the electrical shock pulses. The GSM is used to send the alert message or call .The GPS is used to provide the Location of the device. The ZIGBEE is used to transmit the emergency data to the nearby rescue teams. The ARDUINO UNO is used in the receiver section. The buzzer is used to provide the audio alert.

**BLOCK DIAGRAM**

POWER SUPPLY

EMERGENCY BUTTON

ARDUINO MEGA

GSM

LCD

HEART RATE SENSOR

NERVE STIMULATOR

TOGGLE SWITCH

GPS

ZIGBEE TX

BUZZER

IOT

POWER SUPPLY

ARDUINO UNO

LCD

ZIGBEE RX

BUZZER

**HARDWARE REQUIREMENT**

1. ARDUINO MEGA
2. ARDUINO UNO
3. PUSH BUTTON
4. TOGGLE SWITCH
5. GPS
6. 12 V ADAPTOR
7. BUZZER
8. GSM
9. HEART RATE SENSOR
10. NERVE STIMULATOR
11. ZIGBEE TRANSMITTER
12. ZIGBEE RECEIVER
13. LCD

**SOFTWARE REQUIREMENT**

1. ARDUINO IDE
2. EMBEDDED C LANGUAGE

**APPLICATIONS**

1. It is used for women safety device to make the system most accurate and proper communication.