

# IOT Based Smart Security System for Women

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**ABSTRACT:** Now-a-days women are facing many problems based on their security. The application which is access to track the location and will send the SMS to the nearby police station and the scanned phone numbers. This application prevents women from harassment and also helps them from any bad condition or any health problems like fainting suddenly. This application helps women to overcome their fear in going out and do things what they like to do. Multiple sensors like heartbeat sensor and temperature sensor are used. GPS is used to track the location. IOT is used to send a message to a nearby police station if there is an emergency.

**KEYWORDS:** ATMEGA328 Microcontroller, Wi-Fi Module, Radio Frequency Transmitter and Receiver, GPS Module and Sensors.

## I. INTRODUCTION

Now-a-days, in India this is major chance of the women safety. Our country is very calmness and law durable citizen however, there are some persons are break the law. In recent times many reports show that women are assaulted smart security is enabled through this gadget. The application proposed gives the security system which is designed to help women to do their work with comfort and travel to the places they like. The system main aim is women safety, because they never feel helpless while facing bad situation.

The security system is protected by the social safety challenges. The system added significance on being protected from dangers that originate from outside. Individuals that trespass upon the condition of protection are responsible for the breaking of security. The word "security system" is secured by women. This proposed system main designed with ATmega328 Microcontroller. The aim of this Project presents women to safety detected a system using GPS and Wi-Fi Module. The system can be interconnected with the buzzer to the neighbour's.

This transmitter system if identified the problem and send to the signal from RF receiver, Microcontroller, and a Wi-Fi Module. GPS Receiver tracks the location from satellites in the form of latitude and longitude. The Microcontroller converting analog signal into digital signal using ADC and sends to a sms using a Wi-Fi Module. A Wi-Fi Module is interconnected to the MCU. The Wi-Fi Module sends a SMS to the predefined mobile number. When women are facing dangers, she needs to help means then she can press the switch which is allotted to her. Once shepressing the switch, the entire system will be activated then immediately a message will be sent to concern person with the location using Wi-Fi Module andGPS.

## II. RELATED WORK

The idea to develop a smart band for women is that it's completely comfortable and easy to use a compared existing method. The Smart band integrated with a Smartphone has an added advantage so as to reduce the cost of the device and also in reducing the size. The GPS and the Wi-Fi Module can be used for Smartphone. This also enables on reduced power. The device is integrated of multiple hardware devices, "Smart band" which continuously communicates with Smartphone that has access to the internet.

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The application on Smartphone programmed and loaded with human behaviour's and reaction. Signals generated by the Smartphone. The application with access to GPS and messaging services pre-programmed to send help request messages and location coordinates to the nearest police station and people in the near radius.

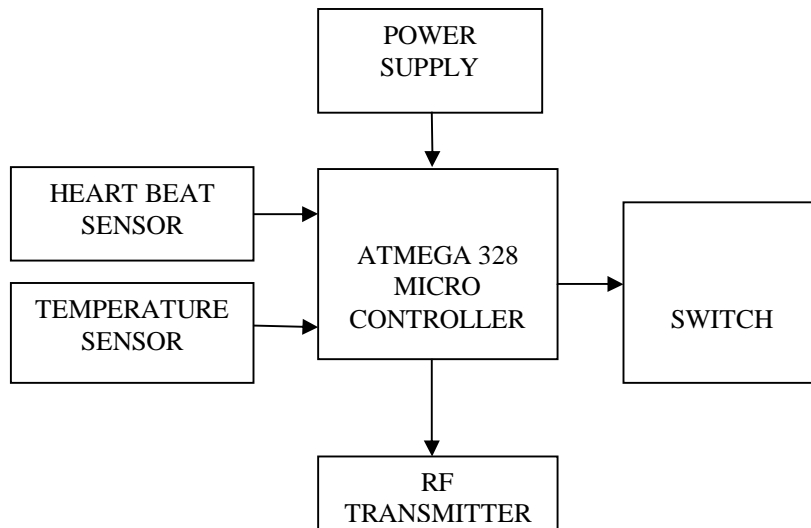
### III. WORKING PRINCIPLE

The Smartphone is connected to the Smart Band. The Smart Band communicates with the Smartphone via a specially designed API. Wrist unit collects data from human being using a body temperature sensor, heartbeat sensor, and switches.

RF module is used to send a signal from the wrist unit to the control unit. The application continuously monitors the heartbeat, temperature, and switch by a Smart Band. The RF receiver is receive the information from smartband and location track the GPS module. The Wi-Fi Module will send the location coordinates and help a message from control unit to the base station from which the message is forwarded to a nearest police station, relatives and also the buzzer will be alert from close by the public if the incident occurs and send a message from predefined numbers.

### IV. SYSTEMS BLOCK DIAGRAM

#### TRANSMITTING UNIT



*Fig 1 Transmitter unit*

**RECEIVER UNIT**

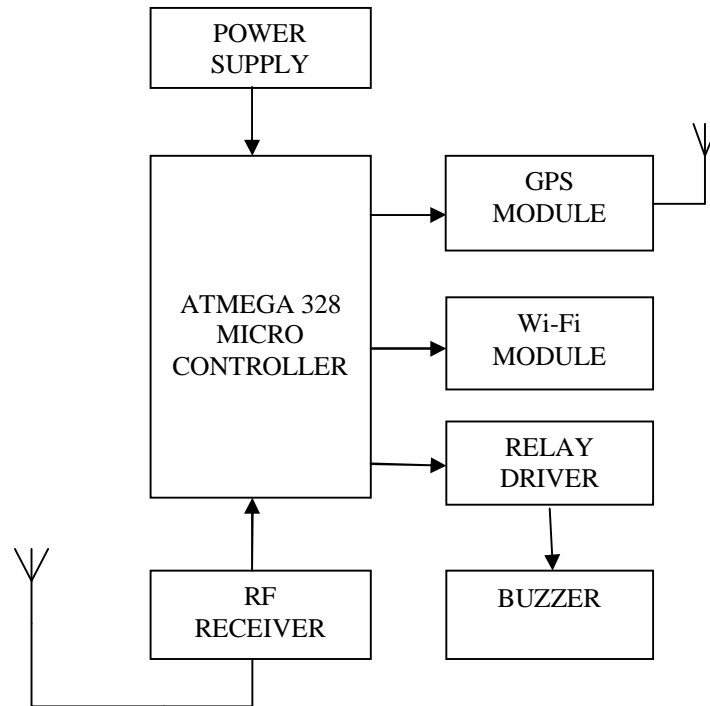


Fig 2 Receiver unit

**V. EXPERIMENTAL RESULT**

A Wi-Fi Module sends the SMS to a particular mobile number. The message is received by the mobile and can be viewed via the in-built SMS application. The database gets updated on the website.

This development is main used for women safety and overcomes the bad situation. In this proposed system when the women are in bad condition it can be intimated immediately to the control rooms. Transmitter unit contains the heartbeat sensor, temperature sensor, ATMEGA328 microcontroller and switch.

They retrieve the signal from a woman’s body and give it to the RF receiver. After processing, it transmits the signal over satellites to a receiver which is the predefined number. The instant MIC and amplifier strengths the voice the women scream or shut above the threshold limit. Through project,the wireless automated safety system for women. The system based on Wi-Fi technology and the main component used is ATMEGA328 microcontroller. This technology will be very much useful to women, if any bad condition.

**VI. CONCLUSION**

A safety device for women, which can be carried using GPS and two different sensors has created. This may help women when there is an emergency. The wi-fi Module is used to identify the predefined phone number. The GPS sends a message automatically to the nearby police station and relatives by tracking their location. This may help women to move freely wherever she wants.

## REFERENCES

- [1] An Intelligent Security System for Violence against Women in Public Places,"Remy George,AnjalyCherian.V, AnnetAntony, HarshaSebastian, Mishal Antony, Rosemary Babu.T ", International Journal of Engineering and Advanced Technology (IJEAT)ISSN: 2249 – 8958, Volume-3,Issue-4, April 2014
- [2] SMART GIRLS SECURITY SYSTEM,"Prof.Basavaraj Chougula1, Archana Naik2, Monika Monu3, PriyaPatil and Priyanka", Das5International Journal of Application or Innovation in Engineering & Management (IAIEM) Volume3, Issue 4, April 2014 ISSN 2319 – 4847
- [3] Mirjami Jutila, Helen Rivas, PekkaKarhula, Susanna Pantsar "Implementation of a Wearable Sensor Vest for the Safety and Well-being of Children", The second international Workshop on Body Area Sensor Networks(BASNet-2014), Elsevier B.V,2014.
- [4]Samuel Tanga,VineethaKalavally, New Yew, JussiParkkinen "Development Of A Prototype Smart Home IntelligentLighting ControlArchitectureUsingSensors Onboard A Mobile Computing System",.enbuild.2016.12.069, 2016, Enb7248.
- [5] Jesudoss A. and Subramaniam N.P., "EPBAS: Securing Cloud-BasedHealthcare Information Systems using Enhanced Password-Based Authentication Scheme", Asian Journal of Information Technology, Vol.15,Issue14,2016,pp.2457-2463.
- [6] Lakshmanan.L and D.SuganthiSharmila, A(2017),"Security Improvement for Web Based Banking Authentication by Utilizing Fingerprint", Global Journal of Pure and Applied Mathematics RIP India, Vol.13,