

HEARTBEAT ALERTING SECURITY SYSTEM FOR WOMEN

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ABSTRACT--*Safety of Women has become a major issue. The crime rates against women in the country have only risen to a great extent. Women think twice before stepping out of their homes, especially at the night. A new approach is given towards the security of women in the form of a device. The objective of the device is to provide women with a tool that can provide them security and ensure their safety in case of any mishap. The paper proposes a better approach to the GSM Technology which makes use of sudden monitoring of heart beat if any mishap happens the alert notification are send to the priority ones within few seconds. The heart beat module will reads the highest heartbeat rate and GSM/GPS module for alerting and location tracking.*

KEYWORDS— *heartbeat alerting security system for women*

I. INTRODUCTION

Security is the condition of being protected against danger or loss. In the general sense, security is the concept similar to safety. The nuance between the two is an added emphasis on being protected from dangers that originate from outside. Individuals or actions that encroach upon the condition of projection are responsible for the breach of security.

II. OBJECTIVE

The project is designed with microcontroller. This project presents a women safety detection system using GPS and GSM modems. The system is interconnected with the alert system to the predefined numbers. The detection and messaging system is composed of a GPS receiver, Microcontroller and a GSM modem. GPS receiver get the location information from satellites in the form of latitude and longitude.

The microcontroller process this information and this processed information is sent to the user using GSM modem sends the notification to the predefined mobile number. When a woman is in danger and in need of self-defense through monitoring her heart beat the notification are activated and concern person with location using GSM and GPS.

This project use battery as well as the battery can also be charged using thermistor and also can be charged by power supply

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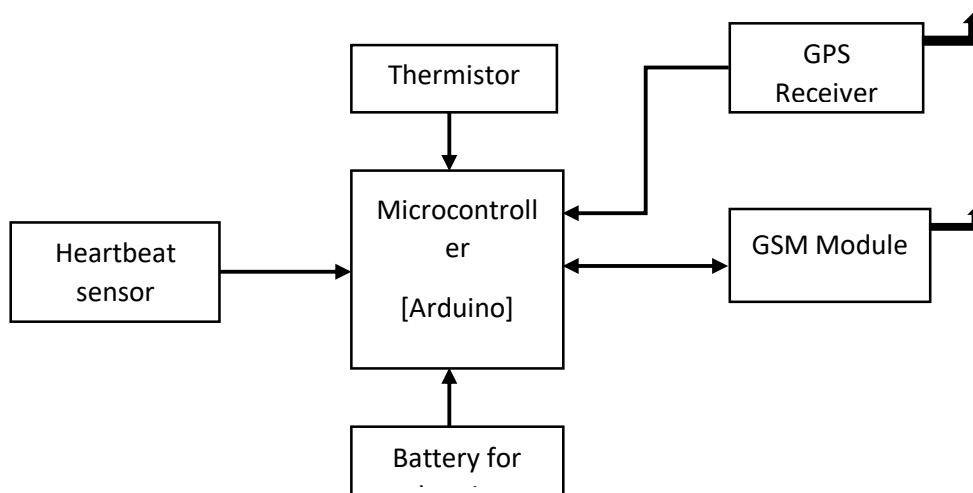
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III. METHODOLOGY

The main purpose of this paper is to introduce the concept of a women's safety device for application. The main purpose of this device is to act as an emergency device for women who are in potential danger of being attacked. The woman possessing this device whenever the heart beat is higher the alert system will alerts notify if in danger. An SMS containing the latitude and longitude coordinates will be sent to pre fed mobile numbers informing them of the danger and the location. The received coordinates can be viewed on google maps to determine the location of the woman and appropriate help can be provided. This concept was devised in the wake of serious crime against women in India and to help curb those crimes.

IV. BLOCKDIAGRAM



V. WORKING

In this project, we are mainly using GPS, GSM, mems an Arduino microcontroller. Arduino will collect the input from the heart beat monitoring. Women's getting any troubles then alert message to the authorized person with location in this device we place the heart beat sensor, these sensors are the monitoring device that allows one to measure/display [heartbeat](#) in real time or record the heart rate for later study. It is largely used to gather heart rate data while performing various types of physical activities. And the sensor is placed near the heart as the heart rate increase above 72 per minutes or below 72 per minutes the device will notified to the pre defined mobile number. And also the main advantage of this device is that it does not contain switch for OFF, that means the device is 24 hours recording system. As the alerts were activated the current location will located by the GPS Technology.

GPS works by providing information on exact location. It can also track the movement of a person. A GPS tracking system uses the Global Navigation Satellite System (GNSS) network. This network incorporates a range of satellites that use microwave signals that are transmitted to GPS devices to give information on location, vehicle speed, time and direction. So, a GPS tracking system can potentially give both real-time and historic navigation data on any kind of journey.

GPS provides special satellite signals, which are processed by a receiver. These GPS receivers not only track the exact location but can also compute velocity and time. And these data's are notified to the predefined number. And the whole software system is taken by Arduino. It is used to control the devices attached such as GSM, GPS etc. As the location is collected through GPS receiver and a message of distress is transmitted to the GSM module attached with it. And the transmitted distress is transferred into the pre defined number store with it.

And the battery is charged by using thermistor, a thermistor helps to ensure that charging is efficient and safe. They do this by providing critical temperature data to users or systems that are necessary for keeping the Li-Ion in optimal conditioning during charging cycles. Using a thermistor to protect charging ensures prolonged battery life and a reduction of hazards.

VI. OUTPUT

The main purpose of this alert system is to ensure the protection for the women by monitoring heart beat and GPS Technology as the alert system notify the speed rate of heart beat it will notified to the pre defined mobile number, And locate the current location.

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