

SMARISA: A Raspberry Pi based Smart Ring for Women Safety Using IoT

<https://www.youtube.com/watch?v=PR0mjv5yys>

The project aims in designing a smart security wearable device for women based on Internet of Things. The system is capable of tracking the location of the women. The system sends alerts to the predefined numbers in the case of emergency. We can also record video images and stored into the web server.

The GPS is the acronym for Global positioning system. This GPS receiver is capable of identifying the location in which it was present in the form of latitude and longitudes. This information is very useful and can be processed for alerting the boat drivers. The GPS gives the data received from the satellites. For this information the GPS communicates with at least three satellites in the space.

The Smart Ring SMARISA consists of a button, a Raspberry Pi board, a camera module and a buzzer. When a woman is in danger, she presses the button that triggers the Raspberry- Pi that enables the camera module to capture an image of the incident. The captured image is stored in a local host server that is run on a machine. The user logs into an Android App, specially designed for the ring, that allows her to select from a list of existing contacts or add a new contact with whom she wishes to communicate. Once the desired contact is selected, the image link fetched from the server, a help message along with the current GPS location of the victim is sent to the emergency contact and police. The buzzer connected to Raspberry Pi is activated and it generates a high frequency screeching alarm to seek the attention of the people in that vicinity and also serves as a warning to the intruder, on the click of the same button.

The main objectives of the project are:

- In case of emergency intimation can be sent to predefined numbers
- Recording video images with recordable camera.

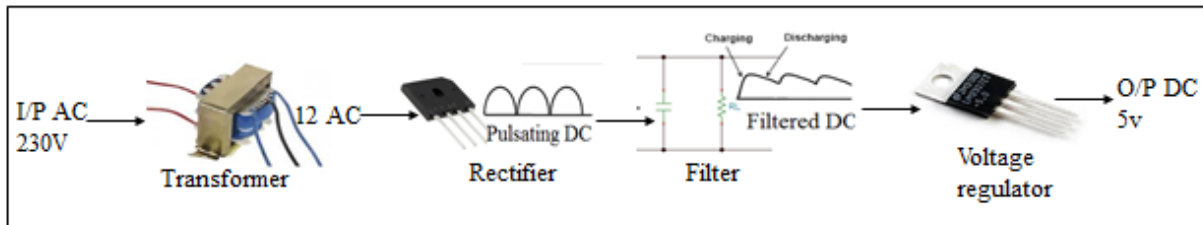
The main building blocks of the project are:

1. Power Supply
2. GSM modem
3. GPS Receiver
4. Recordable camera
5. Buzzer
6. Button
7. Raspberry pi

Software's used:

1. PHP/Python Programming.
2. Linux operating system
3. Express SCH for Circuit design.

Regulated Power Supply:



Block diagram:

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