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# E JACKET FOR WOMEN SAFETY

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**ABSTRACT:** In today's world, women come across many situations that make them feel unsafe. 66% percent of women have reported sexual harassment in recent years. In such situations, the aid of a safety device that will inform the victim's family members or the authorities (in severe situations) may help women feel safer, confident and reduce the chances of harassment. An advanced system can be built that can capture the video of the event as well as send the emergency SMS messages of the victim to respective mobile numbers or email id. The idea to develop a smart system for women is completely comfortable and also easy to use as compared to existing women security solutions such as infamous mobile apps, bulky belts and separate garment that are just very abstract and obsolete. This design suggests a new technology to cover women. This design focuses on security for women so that they will no way feel helpless. The system consists of colorful modules similar to GPS, buzzer, camera, ESP8266 module.

**KEYWORDS:** Monitoring, SMS, Victim, Mobile, IOT.

## I. INTRODUCTION

The status of women in India has experienced numerous changes over once many decades. Since ancient time the history of Indian women has been important. Although, women have acquired top positions in job and society, yet they're facing unethical physical importunity and sexual assault. According to a global bean by Thomson Reuters, India is the 4th most dangerous country in the world for women and the worst country for women among G20 countries. thus, different types of security systems are designed for furnishing security to women in every aspect. This paper presents a unified combination of a wearable jacket at optimum results with minimal tackle factors and mobile technology, to help the victim in any kind of exigency situation.

In the global script, the high question in every girl's mind is about her safety and the importunity issues. The only study hanging every girl is when they will be suitable to move freely on the thoroughfares indeed in odd hours without fussing about their security. This design suggests a new technology to cover women. This design focuses on security for women so that they will no way feel helpless. The system consists of colorful modules similar to GSM, GPS, memory card, shock circuit, buzzer, camera, and Node MCU ESP 8266 modules. In this design, we're using wireless technology for security purposes. An electronic jacket for women's safety means that allows druggies to cover while traveling at odd hours or when they feel helpless. This design is grounded on women's security as it's reported that every day there are numerous cases about women's importunity.

Although an Android-grounded operation on Women's security is formerly out in the request for on-android druggies, I allowed an idea for developing a design grounded on women security using the node MCU module. knot MCU module receives the signals from the GPS system which has present position information and also the Blynk platform allows the system to shoot the Alert Message and position to the predefined credentials persons. A camera used for capturing images of a bushwacker and an external memory card is used for the capturing image is saved on this card. This design also uses the technology like IOT network.

## II. RELATED WORK

In [1] proposed a scheme to improve the women safety by using GPS and GSM model. A small device with a buzzer and microcontroller is designed, and it can be placed on band or watch. When any insecure situation, the woman can make use of this device to send alert SMS by pressing this buzzer to predefined numbers (5 members). But this scheme cannot generate automatic alert SMS. Instead, it requires human interaction during a panic situation. In paper [2] such a device is designed which is a portable one that can be activated as per the requirement of the individual which will locate the victim using GPS and with the help of GSM emergency messages can be sent to the respective locations as per the design. The gadget provides an alarm system, call for help, and electric shock to get rid of the attacker. The paper [3] proposes a voice keyword-recognizing app to recognize the user and activate the app functionality even when the mobile keypad locked. The GPS module tracks the longitude and latitude to trace an exact location of a user and sends the pre-stored emergency message including location to the registered contact numbers. The Audio Recording module starts the recording of the conversation for five minutes and stored as evidence. In paper [4] proposed a tool that combined two or three pillars, equipment fuses from a wearable "savvy band" which constantly speaks to a sharp telephone to be able to access the web section. The product is customized and stacked with all the information needed to fusion human behavior and to answer unique conditions, such as discomfort, fear and pressure. This generates a sign sent to the telephone. The product has the right to go to the GPS and to inform administrations in such a way that, whenever a crisis signal comes, it is able to provide assistance. Smart Foot Device for Women Safety was intended by Nandita Viswanath et al. The paper [5] proposes a SCIWARS app (Spy Camera Identification and Women Attack Rescue System) which consist of two modules. A first module act as an intelligent alerts system which detects the infrared rays coming from every Night-vision hidden cameras placed in changing rooms hotels room etc. and also informed the user about unsafe place through message. Now it's the user responsibility whether to register a complaint or not by forwarding the notification with the location to legal authorities such as Police

## III. PROPOSED METHODOLOGY

The proposed system is to design a portable device that resembles a normal jacket. It consists of a WIFI microcontroller, WIFI/GPS modules, a screaming alarm, and an emergency switch. The prototype includes two independent systems controlled using a switch. When the switch is pressed, the device will get activated, immediately the location of the victim will be tracked with the help of GPS and an emergency message along with latitude and longitude value will be sent to stored contacts with updated location. Simultaneously the LED screaming alarm unit will be activated. The alarm will send out sirens to call out for help. After switch is pressed coordinates can be used to find exact location using GOOGLE MAPS. The project is powered by a 12V DC power supply, it consists of atmega8a microcontroller which is a 16-pin IC. The circuit consists of two switches which function differently to give different output and activate the circuit. The circuits include GPS, and buzzer. The GPS module is connected to the RX pin of the microcontroller through its TX pin and sends the location via the GSM module. The GSM module which is connected to the TX pin of the microcontroller through its RX pin. The output devices include the LCD, LED module, and buzzer. The buzzer is used to grab the attention of nearby people and throw the attacker offguard. When switch is pressed all these feature i.e., location, and the buzzer start working simultaneously, and the location is send to the emergency contacts.

IV. BLOCK AND CIRCUIT DIAGRAM

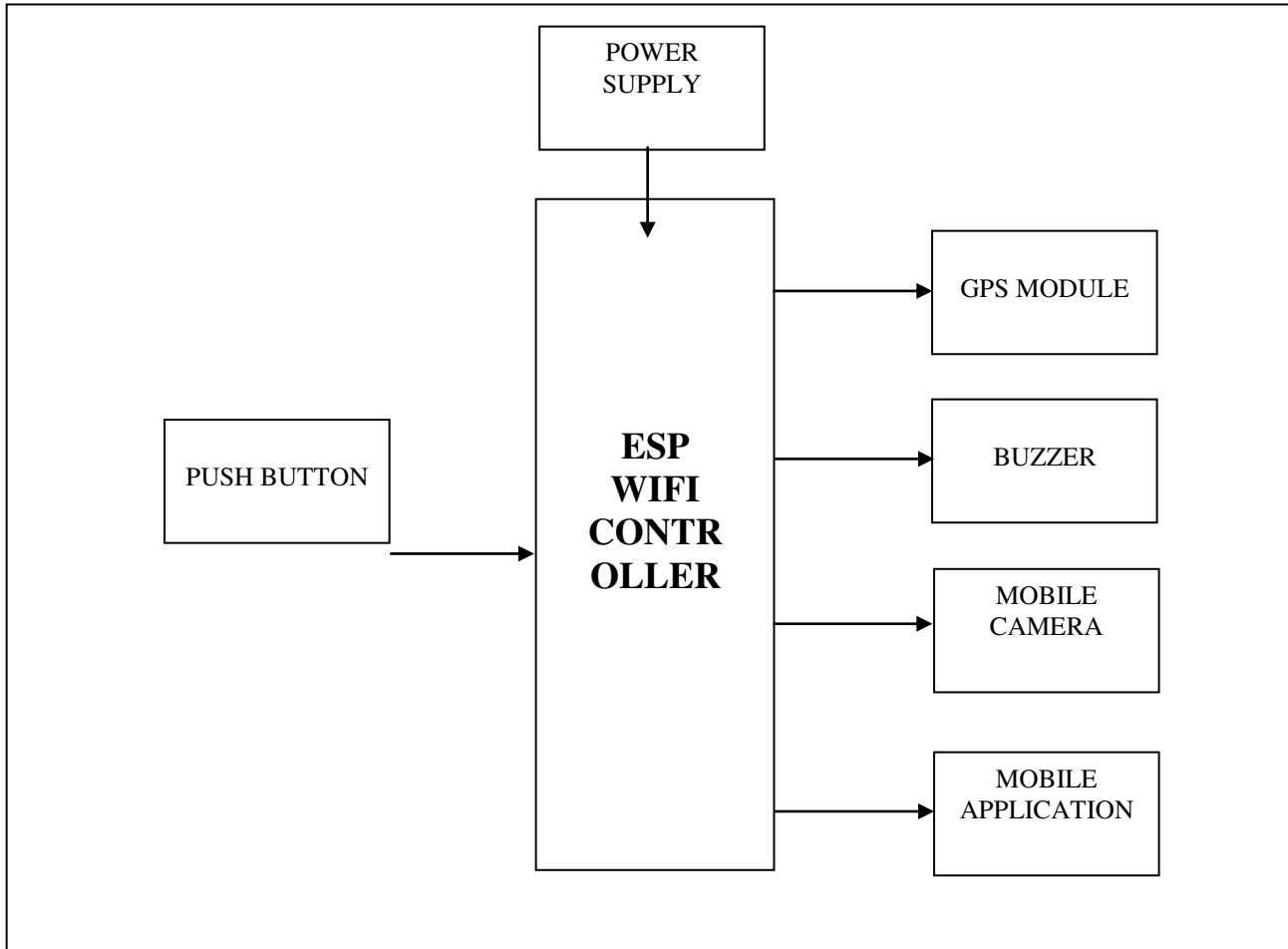


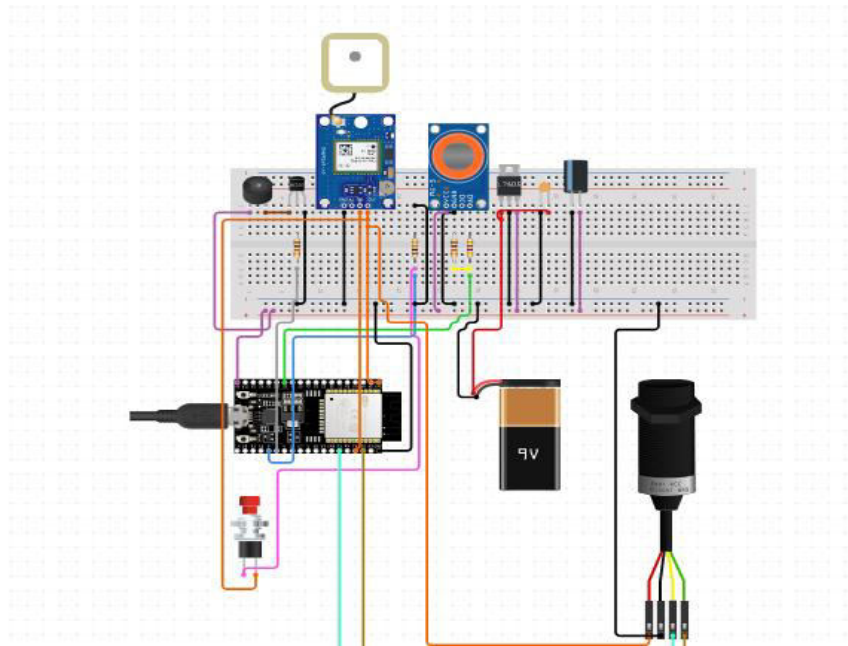
Fig. Block Diagram of Smart E-Jacket

*BLOCK DIAGRAM DESCRIPTION:*

- The block diagram of the E Jacket For Women System is shown in the above Fig. The proposed system consists of various modules such as a buzzer, and Node MCU ESP3266 WIFI module. An electronic jacket for women safety. It's based on Women Security
- It is a simple and easy-to-carry device with various functions. The basic approach is to bully the instant location and a distress message to the authorized person, to avoid unfortunate incidents and provide real-time evidence for swift action against perpetrators of crimes against women. The women's safety system, which allows for immediate response to harassment, focuses primarily on two different parts, one is developing mobile applications for women's security and protection, and the other, users can press a button that is located on the device. The wifi module is embedded with it and sends data to the mobile phone. Mobile phone app sends the messages to predefined contact with live location on mail id.
- The components and modules used to construct the module are the three sensors for the Vimatic mechanism hardware needed, such as GPS, emergency push button, buzzer, and ESP8266, which are all present inside the model. When the victim is in danger situation and pushes the button then an alert message is sent to the mobile of credentials authorized persons via the Blynk IoT application on mail. And an automatic mechanism is activated. GPS is used to track the location of the victim and to send messages, about the location of the

victim to the Credentials of the relatives of the victim via the Blynk IoT application and live streaming will start.

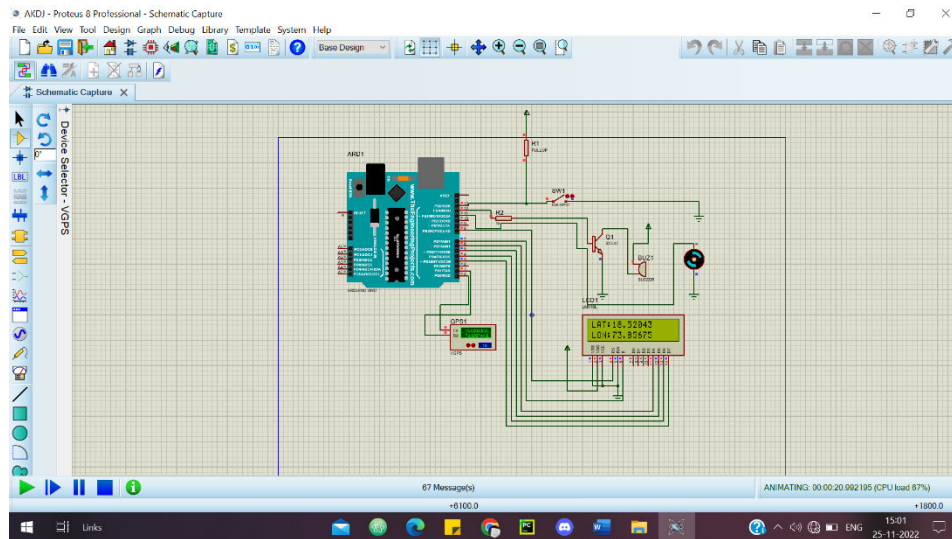
*CIRCUIT DIAGRAM:*



The above circuit diagram shows the connections and data feed between different components of our e jacket for women system.

**V. RESULT**

In this system, Blynk app is used. When a person pushes the button, the system will be activated and send a notification to an authorized person with the help of the Blynk IOT platform on mail ID. Then GPS will be activated to track the location of the victim who is in a dangerous situation. The mobile camera is used to live stream to authorized persons. The Buzzer is used to attract the nearby people in the surrounding. Electronic Jacket for Women Safety in That We Use Wireless System to Send Message, Location. It Is Very Useful for Security Purposes, Therefore, This System Is Used for Protection and to Control Other Activities Which Are Happen Today's Life.



## VI. CONCLUSION AND FUTURE WORK

The women safety jacket allows an immediate response and mainly focuses on different parts for protecting the women in distress, first is providing instant protection to the user by an alarming sound by using a buzzer. In the second part, the user can send real-time location to the predefined numbers using GPS. The main aim of designing this jacket is to implement a simple, reliable, comfortable, and easy-to-carry device with magnanimous functionality for women which allows immediate response in case of harassment or assault providing protection in an affordable cost that can be easily endured by the common users. The major limitation is power drainage due to continuously keeping the circuit on but we can also overcome this problem by using small-size battery like wristwatch batteries or rechargeable batteries like mobile batteries this would make the system compact and light in weight. The System is built up of Embedded System and is Lightweight and easy to carry and also supports live streaming functions. The Alert system is used to notify and alert the persons locally about the emergency situation. The Future scopes can be considered in this Project to make it for public use. We are focusing on building an effective, fast, and reliant system to make the women of INDIA feel safe and empowered. This type of idea being the first of its kind plays a crucial role in ensuring women safety in the fastest way possible automatically.

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