

# SHE SAKHI

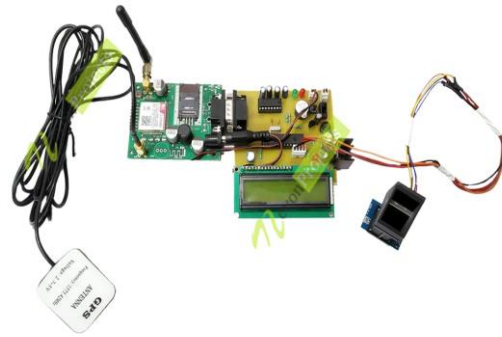
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**Abstract:** This paper explores the application of Internet of Things (IoT) technology to enhance women's safety in urban environments. With rising concerns over personal security, IoT solutions such as smart wearables, connected apps, and sensor networks offer innovative ways to empower women and provide real-time support. We discuss the integration of GPS tracking, emergency alert systems, and community-based networks to ensure immediate assistance and increase awareness. Case studies highlight successful implementations, demonstrating reduced response times and improved safety outcomes. The findings suggest that IoT can play a crucial role in fostering safer spaces for women, promoting autonomy, and encouraging societal change. Future research will focus on expanding these systems and addressing privacy concerns to maximize effectiveness.

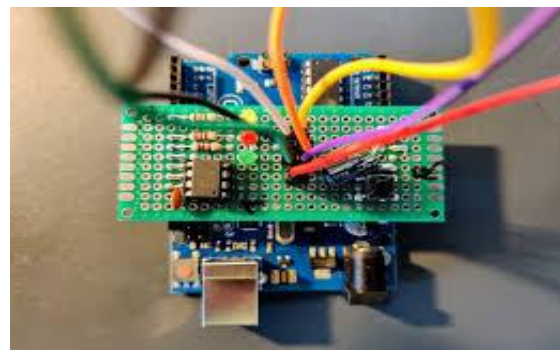
## 1.INTRODUCTION

Women's safety remains a pressing global concern, with many facing threats to their security in public and private spaces. Traditional measures, while helpful, often fall short in providing timely assistance or prevention. The rapid advancement of Internet of Things (IoT) technology presents a transformative opportunity to enhance women's safety through innovative, connected solutions. IOT encompasses a network of devices that communicate and share data, enabling real-time monitoring and response. This technology can empower women by providing them with tools to alert authorities, navigate safely, and connect with their communities. For instance, smart wearables can track location and send distress signals, while mobile applications can offer safety tips and emergency contacts. As urbanization increases and social dynamics evolve, the integration of IoT in safety protocols not only fosters a sense of security but also promotes independence and confidence among women. This introduction explores the potential of IoT in reshaping safety landscapes, addressing challenges, and highlighting successful implementations aimed at safeguarding women's rights and well-being in society.



## 2.COMPONENTS

**ARDUINO UNO HAT** - The "Women Safety Using IoT" project utilizing an Arduino Uno aims to enhance personal security through innovative technology. It incorporates components such as GPS for real-time tracking, motion and sound sensors for detecting threats, and GSM or Wi-Fi modules for sending emergency alerts. When activated, the system can send distress signals and location information to designated contacts, providing immediate assistance. This project not only empowers women by improving their safety during travel or in vulnerable situations but also fosters a sense of security through connectivity and timely alerts.



**ELECTRICAL SWITCH-** In the "Women Safety Using IoT" project, the electrical switch plays a crucial role as an activation mechanism for emergency alerts. This switch can be designed as a discreet button that the user can press in threatening

situations, instantly triggering the system to send distress signals to pre-selected contacts along with GPS location data. By integrating the switch with the Arduino Uno, it ensures a quick response, allowing users to call for help without drawing attention. The simplicity and accessibility of the switch make it an essential component, providing users with a reliable way to enhance their personal safety in critical moments.

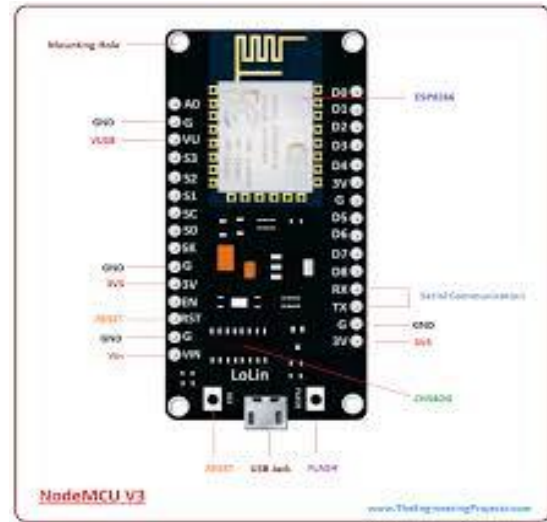


**GPS MODULE TRACKER-** The GPS module tracker is a vital component of the "Women Safety Using IoT" project, providing real-time location data to enhance personal security. It continuously receives signals from satellites to determine the user's precise location, which can be transmitted to emergency contacts during a distress situation. By integrating the GPS module with the Arduino Uno, the system enables users to share their whereabouts instantly when they feel threatened, ensuring that help can reach them quickly. This feature not only empowers women by providing a reliable means of tracking but also fosters peace of mind, knowing that their location can be monitored in emergencies



**NODE MCU V3** – Node MCU V3 is an integral component of the "Women Safety Using IoT" project, offering a powerful and versatile platform for IoT applications. It combines an ESP8266 Wi-Fi module with a microcontroller, enabling seamless internet connectivity for sending alerts and location data. In this project, Node MCU facilitates communication between the safety system and a

mobile app or web interface, allowing users to receive real-time updates and notifications. Its compact size and ease of programming make it ideal for implementing features like emergency alerts, GPS tracking, and remote monitoring, significantly enhancing the overall functionality and effectiveness of the women's safety solution.



**LCD** - The LCD (Liquid Crystal Display) is an important component in the "Women Safety Using IoT" project, providing a user-friendly interface for real-time information display. It can show vital status updates, such as the system's operational status, GPS coordinates, and alerts sent to emergency contacts. This immediate visual feedback helps users understand their situation at a glance, allowing them to stay informed and make quick decisions. By integrating the LCD with the Arduino or Node MCU, the project enhances usability, ensuring that essential safety information is easily accessible, which is crucial in high-pressure scenarios where time is of the essence



**BUZZER**-The buzzer is a critical component of the "Women Safety Using IoT" project, serving as an audible alarm that alerts both the user and nearby individuals in case of an emergency. When

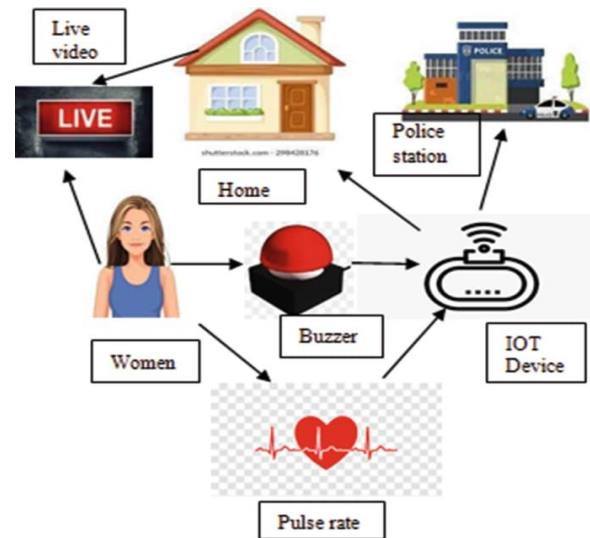
activated, the buzzer emits a loud sound to attract attention, which can deter potential threats and signal for help. This feature enhances the system's effectiveness by providing a clear indication that the user is in distress. Additionally, the buzzer can be used for status notifications, indicating when the system is armed or has successfully sent an alert. By integrating the buzzer with the Arduino or Node MCU, the project ensures that users have both visual and auditory feedback, reinforcing their safety and security in critical situations.



### 3.WORKING

The "Women Safety Using IoT" system operates by combining several key components to ensure real-time monitoring and quick response in emergencies. At its core, an Arduino Uno or Node MCU is programmed to integrate various sensors, such as GPS, motion detectors, and sound sensors. When a user feels threatened, they can activate the system via a discreet button or by triggering an alert through motion or sound detection. This activation prompts the microcontroller to gather the user's current location from the GPS module and send emergency notifications through a GSM or Wi-Fi module to pre-selected contacts, providing them with real-time updates about the user's situation.

In addition to sending alerts, the system employs an LCD to display crucial information, such as the operational status and location coordinates. A buzzer serves as an audible alarm to attract attention, enhancing the user's safety by alerting those nearby. The integration of these components allows the system to function seamlessly, providing users with a reliable tool for personal safety. This interconnectedness not only empowers women by enabling them to quickly signal for help but also fosters a sense of security through continuous monitoring and immediate communication in critical situations.



### 4.ADVANTAGES

- Real-Time Location Tracking
- Instant Alerts
- Enhanced Awareness
- User-Friendly Interface
- Deterrent Effect

### 5.APPLICATIONS

- Personal Safety Devices
- Mobile Safety Apps
- Smart Home Security
- Emergency Response Systems
- Campus Safety Solutions

### 6.CONCLUSION

The integration of IoT technology in women's safety solutions represents a significant advancement in personal security, empowering individuals with tools that enhance their protection in everyday situations. By leveraging real-time tracking, instant alert systems, and smart monitoring, these solutions provide users with a reliable means to seek help and stay aware of their surroundings. As societal concerns about safety continue to grow, IoT innovations offer a proactive approach, fostering confidence and peace of mind for women everywhere. Ultimately, these technologies not only improve individual safety but also contribute to a broader culture of awareness and protection within communities.

### 7.ACKNOWLEDGMENT

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invaluable guidance and insights throughout the process. We appreciate the support from technology experts who helped us integrate various components and ensured the system's functionality. Special thanks to the community members who shared their experiences and suggestions, which informed our design and implementation. Finally, we acknowledge the efforts of our team members, whose dedication and collaboration were essential in bringing this project to fruition, aiming to create a safer environment for women everywhere.

#### 8. REFERENCES

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