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Women's Wearable Security and Safety Device

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OUTLINE

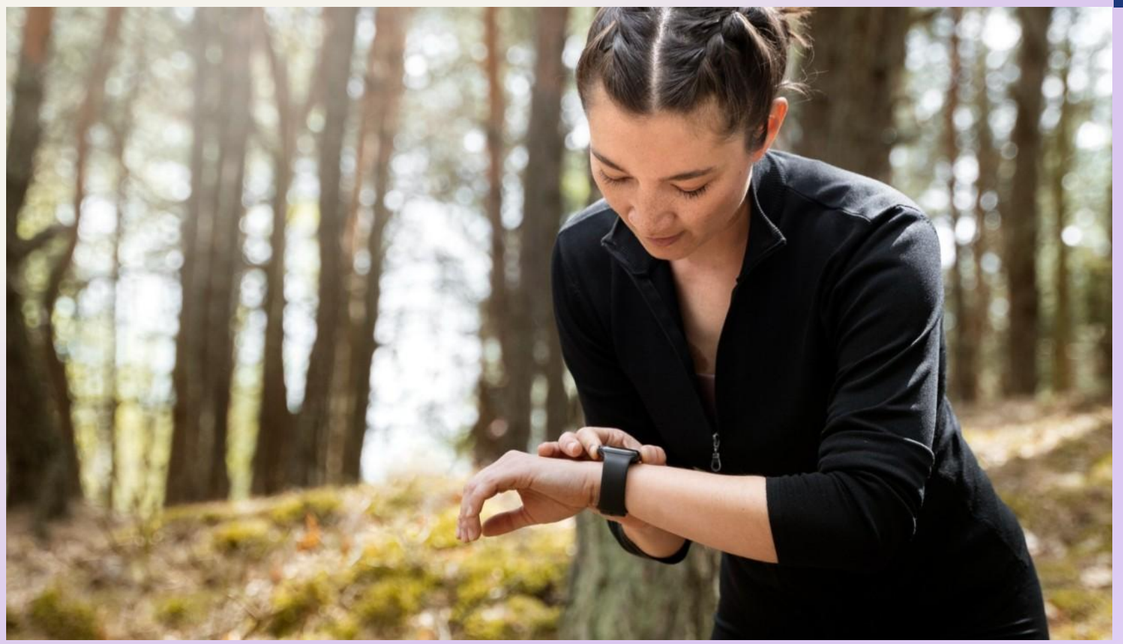
Abstract

Women's safety has become a pressing issue in many parts of the world, with increasing reports of harassment, assault, and violence. Wearable security and safety devices specifically designed for women are emerging as effective tools to enhance personal safety. This paper discusses how these devices work, including features like automatic alerts when sudden movements or falls are detected, alarms to scare off attackers, and cameras to record evidence. Connectivity options like Bluetooth and cellular networks allow users to share their location and stay connected with emergency contacts.

While these devices offer significant benefits for personal safety, they also face challenges such as limited battery life, privacy concerns, and the need for greater public awareness. The paper explores these issues and suggests ways to improve wearable safety devices, making them more reliable and effective for women's security.

Introduction

Rising global concerns over women's safety drive demand for personal safety devices



Our mission

To examine the current state of wearable safety devices, identify gaps in existing technologies, and propose advancements to improve effectiveness and usability

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FEATURES OF WOMENS SAFETY DEVICE

- Sos Alert
- Parental mode
- Enabled Wifi
- 4G SIM
- Geo-Fencing
- Image Capture
- Audio Recorder

Existing system

Operated via
a touchscreen, rely
on mobile apps

Heart rate
monitoring

Fitness tracking
and Alarm reminders

Drawbacks

B for Battery Issues

C for Connectivity Problems

A for Accessibility and Affordability

M for Misused by someone else

P for Privacy and Data Security Concerns

Proposed System

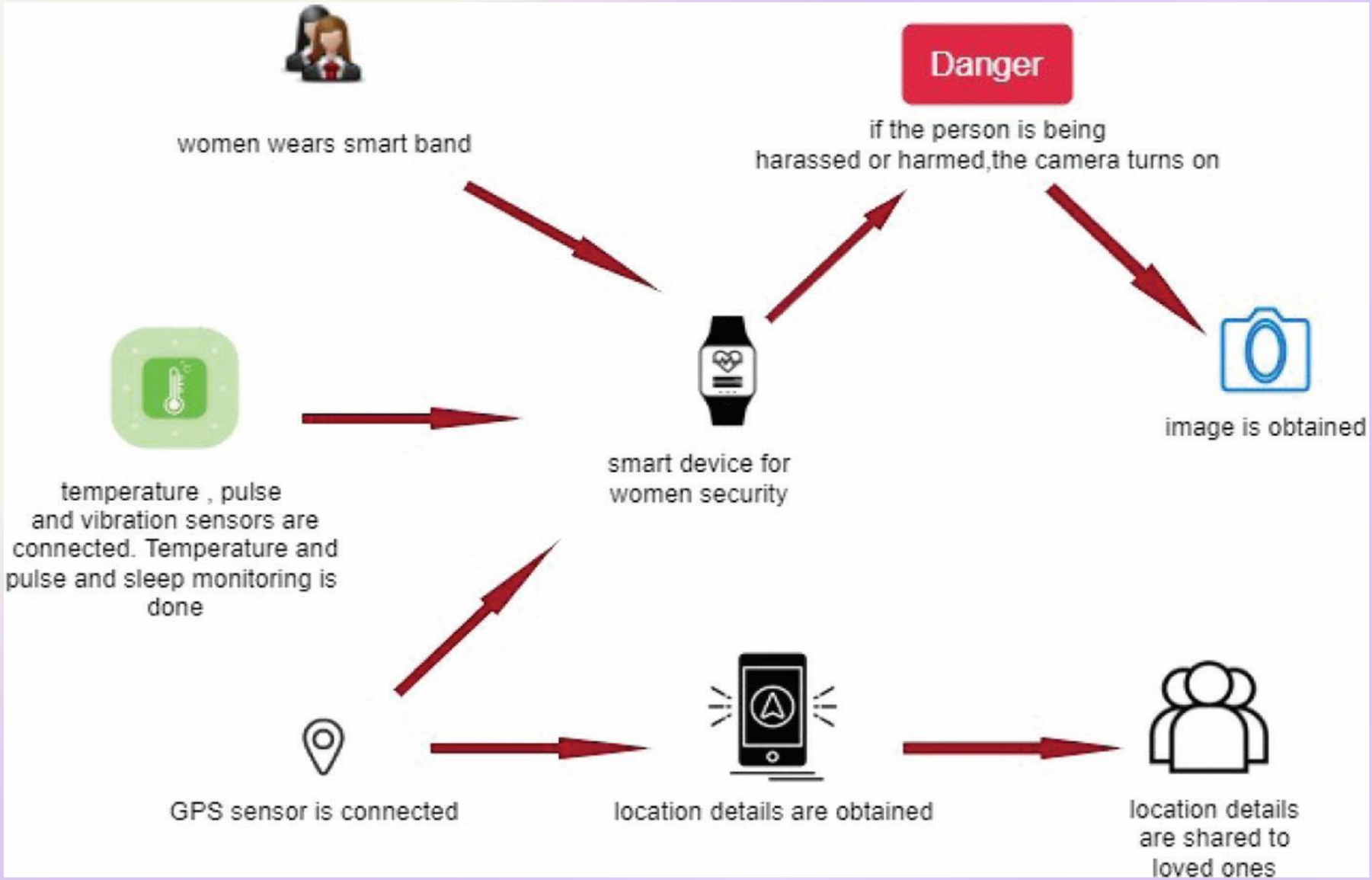
Wifi Enable with 4G Sim have direct on-the-go access to you

Built-in cameras, alarms for deterrence and evidence gathering, Parental Control

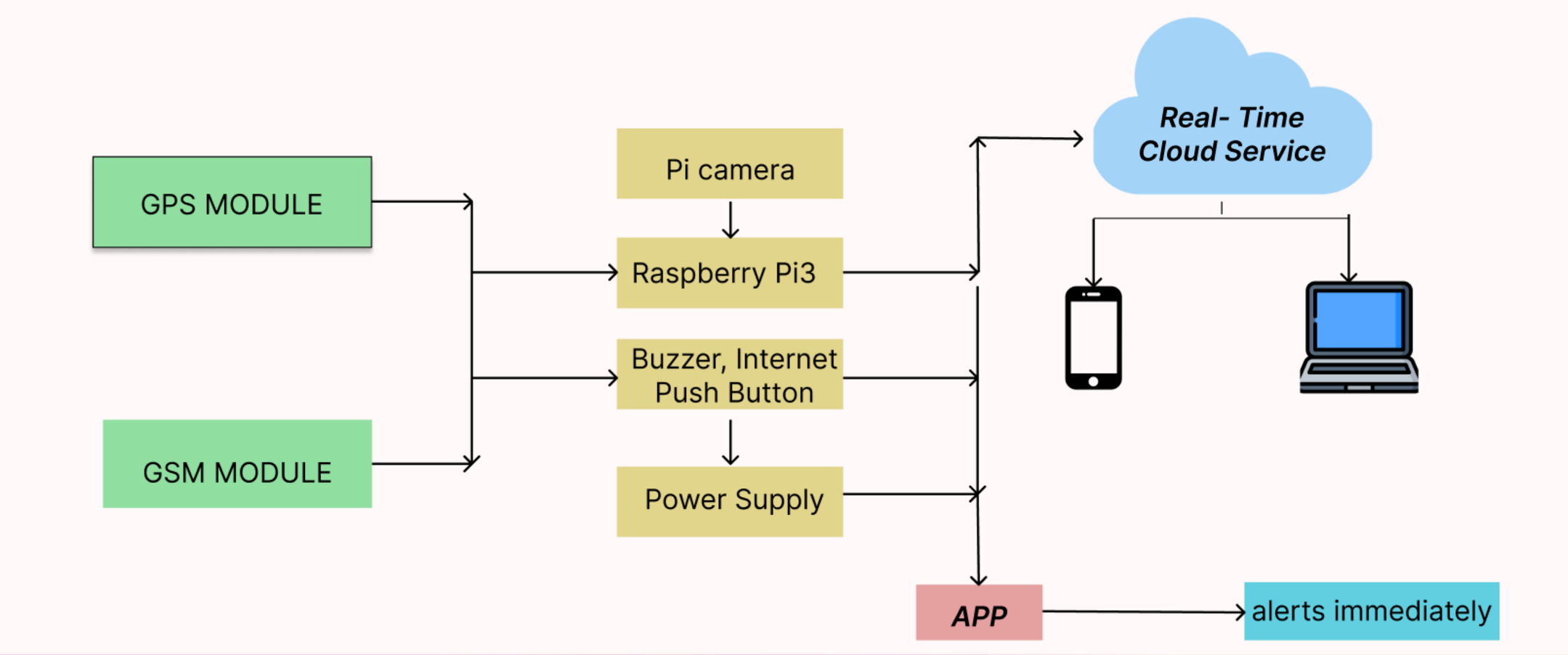
Real-time location sharing such as In-Built GPS tracking, Geo-fencing

Bluetooth and cellular network integration for continuous monitoring

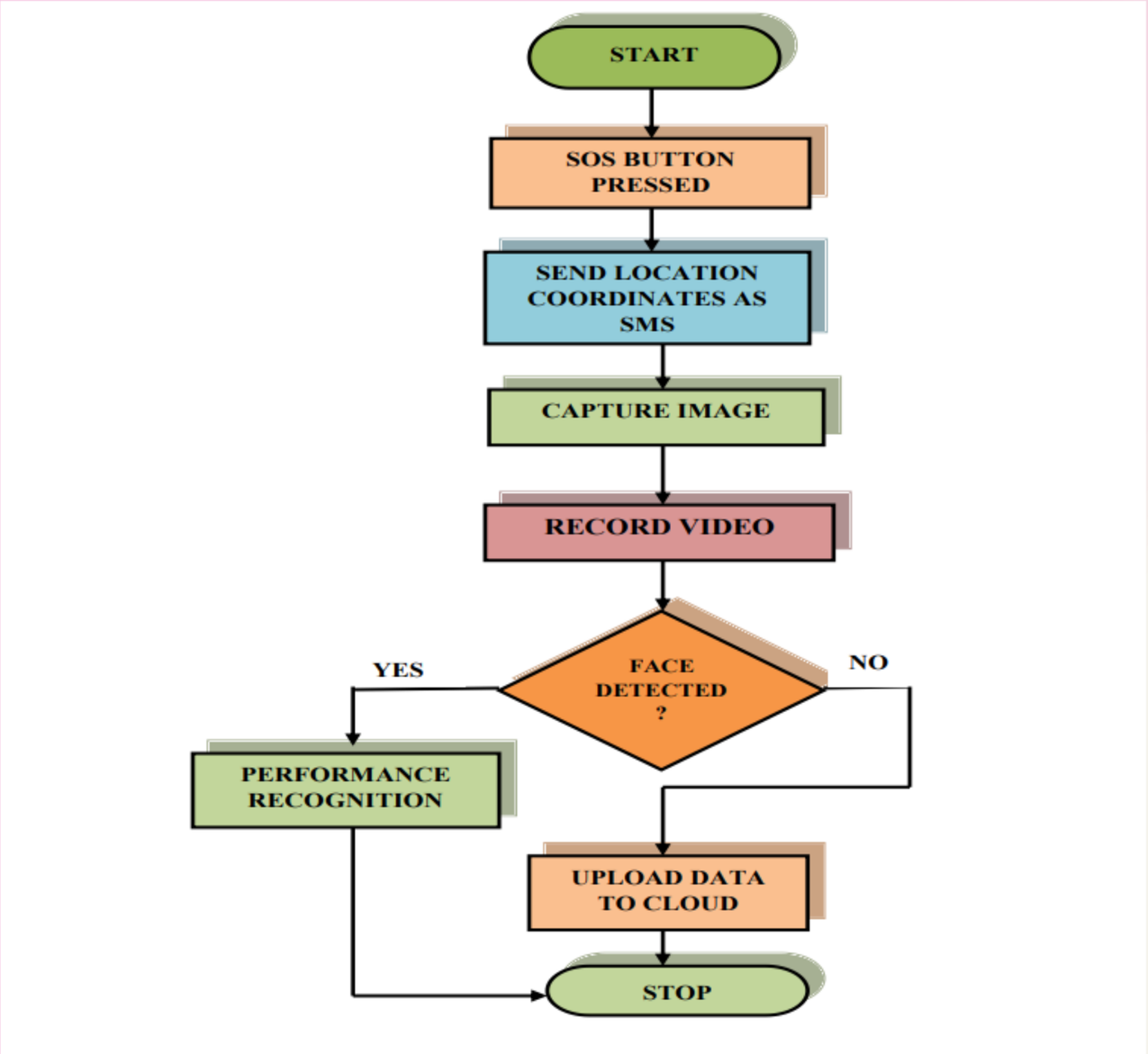
Design Architecture



Modules


GPS MODULE
GSM MODULE
Pi camera
Raspberry Pi3
Buzzer, Internet
Push Button
Power Supply
Real- Time
Cloud Service
APP
alerts immediately

Modules


START
SOS BUTTON PRESSED
SEND LOCATION COORDINATES AS SMS
CAPTURE IMAGE
RECORD VIDEO
FACE DETECTED ?
YES
NO
PERFORMANCE RECOGNITION
UPLOAD DATA TO CLOUD
STOP

Advantages

- **Enhanced Personal Safety.**
- **Integration with Other Devices.**
- **Ease of Use.**
- **Health Monitoring.**
- **Location Tracking.**
- **Deterrence.**

Requirement specifications

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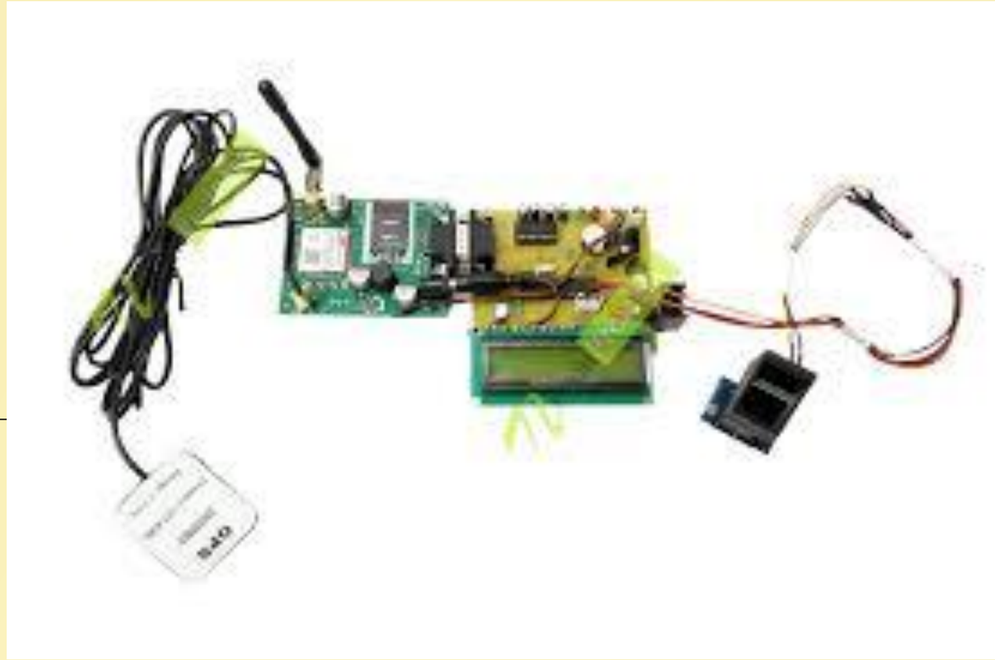
"Hardware Requirements": Raspberry Pi3, GPS Module, GSM Module, Pi camera, Buzzer, Pushbutton, Power Supply



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“Software Requirements” :Platform : Windows 10, Mac OS Mojave, Ubuntu 16.04
Raspbian Front End : Python
Back End : Firebase, Android Phone, Google Drive

Conclusion

Women’s wearable security devices are evolving with advanced technologies to provide better protection and peace of mind

Addressing current limitations and incorporating innovative features can significantly enhance their effectiveness and adoption

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THANK YOU