PROJECT REPORT

Women and Children Safety Device Using ESP32, GPS, and GSM Module

1. Introduction

Women and children’s safety is a major concern in today’s society. Many incidents occur where the victim is unable to call for help due to panic or physical restrictions. This project focuses on developing a portable safety device that sends an immediate alert message with the user's GPS location to predefined contacts when activated.

2. Problem Statement

In unsafe situations, victims often struggle to communicate their exact location. Existing apps depend on internet connectivity, so a dedicated hardware device is required.

3. Objectives

• To design a compact, reliable distress alert device.

• To send instant SMS alerts with real-time GPS location.

• To operate without internet.

• To use low■cost and easily available components.

4. System Overview

The system includes an ESP32 controller, GPS module, GSM module, and a panic button. When pressed, location is fetched and sent via SMS.

5. Components Required

• ESP32 Board

• GPS Module (NEO■6M or similar)

• GSM Module (SIM800/SIM900)

• Panic Button

• Rechargeable Battery

6. Working Principle

The device monitors the panic button. When activated, GPS coordinates are read and transmitted via GSM as an emergency SMS.

7. Advantages

• Works without internet

• Low■cost, reliable, portable

• Real■time location updates

8. Applications

Women safety, child safety, elderly monitoring, solo travellers.

9. Conclusion

This project provides an efficient, portable emergency alert system using ESP32, GPS, and GSM. It can significantly improve personal safety and reduce emergency response time.