

Intelligent Backpack : A Smart Companion for Personal Safety and Security

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Abstract: Personal safety has become a significant concern in today's society, especially for students, women, and daily commuters. Technological advancements in the Internet of Things (IoT) provide effective solutions for enhancing personal security through smart wearable systems. This project presents the design and development of an **Intelligent Backpack**, a smart companion aimed at improving personal safety and security. The proposed system integrates a microcontroller with multiple sensors, a GPS module, and a communication module to detect emergency situations such as distress, unauthorized bag removal, or suspicious activity.

Keywords: Intelligent Backpack, Personal Safety, IoT, GPS Tracking, Emergency Alert System, Smart Wearable Device, Sensors, GSM Communication, Security System