Development of Women's Safety System Using Iot and Taser Technology(2024)

ABSTRACT

This paper proposes a sophisticated, Internet of Things(IoT) enabled safety system specifically designed to enhance the security and well-being of women. The system integrates multiple biometric sensors, including electroencephalogram (EEG) and heart rate monitors, to facilitate real-time physiological monitoring and automatic distress detection. In critical situations whether identified through sensor thresholds or activated manually via a dedicated panic switch the system promptly transmits alert messages and precise GPS location data to predefined emergency contacts using GSM communication. A distinctive feature of the device is the incorporation of a taser mechanism, enabling immediate self-defense in threatening scenarios. Built on the Arduino UNO platform, the system also supports remote oversight through an IoT interface, ensuring continuous monitoring and data logging. Emphasizing data security, user privacy, and regulatory compliance, the proposed solution represents a comprehensive, technologically advanced approach to personal safety, aiming to empower women and respond effectively to real-time emergencies.