IOT BASED WEARABLE DEVICE FOR THE SAFETY AND SECURITY OF WOMEN AND GIRL CHILDREN

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Abstract: This abstract introduces an IoT-based wearable device for women and girls' safety. It integrates GPS-GSM, accelerometer, and heart rate sensors to detect falls and anomalies, triggering SOS alerts when activated. Real-time location data and emergency signals are sent to designated contacts. The device includes geo-fencing, alerting users upon entering or leaving safe zones for proactive monitoring in diverse environments.

Individual contribution and findings: I led the assembly of our IoT device, innovatively solving compatibility and connectivity challenges with custom code solutions. Collaborating on machine learning algorithms facilitated the smooth integration of hardware and software, improving overall functionality. This project offered practical experience in assembly, troubleshooting, and teamwork, honing my skills in hardware integration and communication.

Individual contribution to project report preparation: In the project report, I focused on experimentation and testing, contributing to both the assembly of the IoT device and the development of machine learning algorithms. My role included configuring hardware components and designing efficient algorithms for sensor data processing. Through rigorous testing, I ensured optimal performance in both areas.

Individual contribution for project presentation and demonstration: I emphasized our project's core components: assembling the IoT device and providing results from developing machine learning algorithms. My responsibilities included overseeing smooth hardware setup and leading algorithm development for efficient sensor data processing. This dual role demonstrated both the practical assembly and the analytical results crucial to our project's success.

Full Signature of Supervisor/s:

Full signature of the student: