Safety Wristband: Detecting Falls and Ensuring Safety in Emergencies

Elkady, Alanoud (School: Amna Bint Wahab Preparatory School for Girls)
Alkaladi, Reem (School: Amna Bint Wahab Preparatory School for Girls)

Falls significantly impact public health, particularly among the elderly and those with certain health conditions, leading to roughly 68,400 deaths and numerous emergency interventions each year. The Safety Wristband project aims to bridge the current gap in fall prevention and response through innovative technology. This initiative's goal is to develop a novel wristband that reduces the frequency and severity of falls among vulnerable groups. It employs advanced sensor technology for rapid fall detection and emergency alert activation. The project includes creating a lightweight, wearable wristband, complemented by a mobile application named "Safety." This app communicates with the wristband to signal fall detections and share the wearer's location with emergency contacts. The development process encompasses prototype creation, sensor integration, app development, and initial accuracy and functionality tests. Early results show the wristband's effectiveness in detecting falls and the app's efficiency in shortening the time to alert emergency services. Current efforts are directed towards analyzing the system's overall efficiency and response time enhancements. The Safety Wristband introduces a forward-thinking solution to fall prevention and emergency response, promising to significantly improve safety for the elderly and at-risk individuals. It represents a step forward in integrating technology with health monitoring and assistance. Future research will aim to refine testing, improve device accuracy, and incorporate additional features like screens and sound-alert button, potentially setting new standards in personal health technology.

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