

Wearable Fall Detection System Using Arduino and HealthCare Management System Based on Website

UNDERGRADUATE THESIS
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By :
Almika Abu Ghiffari
001202200158

FACULTY OF COMPUTING
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Almika Ghiffari

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ABSTRACT

The safety of public restroom users, especially the elderly and individuals with certain health conditions, remains a serious concern due to the lack of a real-time incident monitoring system. Cases of slipping, fainting, or medical emergencies that are not detected in time can be fatal due to delays in assistance. Manual monitoring by officers cannot be done continuously for 24 hours due to limited human resources. Therefore, an automated system is needed that can detect accidents in the restroom and send alerts quickly to relevant parties.

This research aims to design and develop an accident detection system in restrooms using sensor technology integrated with website-based health management. The system is designed to be able to detect events such as falls, fainting, or other emergencies, and provide immediate notification to officers or emergency services. From the user's point of view, especially vulnerable groups such as pregnant women and the elderly, the presence of this system provides a sense of security because they know help will come immediately when needed. With this system in place, it is expected that incident response will be faster, which will significantly improve the safety and comfort of public restroom users.

Keywords: Management System, Fall Sensor Detection.

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