

Requirement Document for Fall Detection Feature for Elderly Care Wearable Device

Purpose

The primary objective of integrating a fall detection feature into an elderly wearable device is to notify emergency contacts if the wearer falls during activities such as walking or climbing stairs. Detecting falls promptly helps healthcare workers assist the elderly swiftly, minimizing potential harm. This feature is particularly useful during night-time when others may be asleep. Additionally, the feature can be expanded to detect abnormalities like limping due to injuries during walking.

Primary Features

The fall detection feature will include the following key functionalities:

- Detection of falls in the elderly.
- Notification of emergency contacts following a fall.
- Alerting emergency services, such as healthcare workers, in the event of a severe fall.

Secondary Features

In addition to the primary functionalities, the fall detection feature aims to include the following secondary attributes:

- Activity monitoring of the elderly, including walking and climbing.
- Notification to the elderly and emergency contacts in case of abnormal walking patterns like limping.

Compliance and Safety

Adherence to regulatory standards and ensuring user safety are vital considerations for the implementation of this feature:

- Compliance with healthcare privacy regulations to safeguard sensitive user data.
- Implementation of robust security measures to securely store and transmit user information.

Future Considerations

Future enhancements for the fall detection feature aim to broaden its scope and enhance user satisfaction:

- Explore advanced AI algorithms to continually enhance fall detection accuracy.
- Incorporate intuitive user interfaces based on ongoing user feedback to optimize usability.
- Implement proactive health monitoring features to detect early signs of potential health issues beyond falls, such as unusual activity patterns for example limping, etc.