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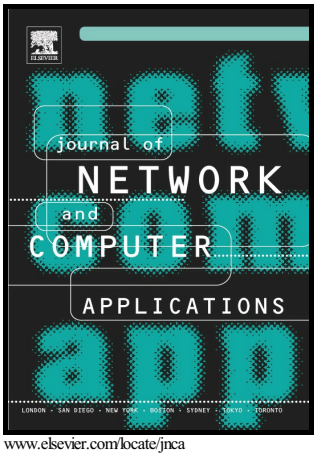

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An Inferential Real-Time Falling Posture Reconstruction for Internet of Healthcare Things

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Abstract

This study constructs a approach to reproduce the real-time falls of humans, which uses a triaxial accelerometer and triaxial gyroscope to detect the occurrence of a fall, and an attitude algorithm to estimate the angles of each part of the human body, where internet of healthcare things collects the information of each sensor, and a Bayesian Network deduces the next action. Inferential Bayesian probability could present more complete data of a fall to healthcare providers. Even if the data are damaged by the transmission network or equipment, the next action still could be deduced by Bayesian probability, and because the fall could be reproduced in a 3D Model on the client side, the fall occurrence is shown more intuitively, and could thus serve as reference for first aid.

Keywords: Posture Reconstruction, Sensors, Bayesian Network, Internet of Healthcare Things.

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