Abstract

One of the major problems that may encounter old people at home is falling. Approximately, one of three adults of the age of 65 or older falls every year. The World Health Organization reports that injuries due to falls are the third most common cause of chronic disability. In this paper, we proposed an approach to indoor human daily activity recognition, which combines motion and location data by using a webcam system, with a particular interest to the problem of fall detection. The proposed system identifies the face and the body in a given area, collects motion data such as face and body speeds and location data such as center of mass and aspect ratio; then the extracted parameters will be fed to a Fuzzy logic classifier that classify the fall event in two classes: fall and not fall.

References

Real Time Recognition of Elderly Daily Activity using Fuzzy Logic through Fusion of Motion and Location Data

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Index Terms

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Fall detection  Motion data  Face detection  Center of mass  webcam