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(57) Abstract :

Over the last few years, real-time fall detection systems based on vision have advanced at a rapid pace. Falling is one of the leading causes of death among the elderly. When it comes to saving lives, the ability to detect a fall is critical. There are three types of fall detection methods that are commonly used, including wearable devices, ambient sensors, and vision-based methods. Through analysing the rate of change of motion with respect to the ground point, this invention proposes a real-time vision-based fall detection system to assist elderly people with their daily activities. The goal of our research is to develop a reliable method of detecting falls that does not require the use of any physical devices. The deep convolutional neural network (Fall_DCN_Net) and the notify.run module in Python are used to implement the proposed method. We used two publicly available datasets for our experimental analysis: the UR Fall Dataset (URFD) and the Fall Detection Dataset (FDD).

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