

## Classification of Health Risk Factors to Predict the Risk of Falling in Older Adults

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**Abstract :** Cognitive decline and frailty is apparent in older adults leading to an increased likelihood of the risk of falling. Currently health care professionals have to make professional decisions regarding such risks, and hence make difficult decisions regarding the future welfare of the ageing population. This study uses health data from The Irish Longitudinal Study on Ageing (TILDA), focusing on adults over the age of 50 years, in order to analyse health risk factors and predict the likelihood of falls. This prediction is based on the use of machine learning algorithms whereby health risk factors are used as inputs to predict the likelihood of falling. Initial results show that health risk factors such as long-term health issues contribute to the number of falls. The identification of such health risk factors has the potential to inform health and social care professionals, older people and their family members in order to mitigate daily living risks.

**Keywords :** classification, falls, health risk factors, machine learning, older adults

**Conference Title :** ICRAHM 2019 : International Conference on Risk Analysis and Hazard Mitigation

**Conference Location :** Stockholm, Sweden

**Conference Dates :** July 15-16, 2019