

A Comparative Study of Machine Learning Approaches for Human Activity Recognition

The goal of this project is to study the performance of Machine Learning (ML) techniques used in Human Activity Recognition (HAR). Specifically, we aim to 1) evaluate and benchmark the performance of various ML techniques used for HAR against established ML performance metrics using multiple datasets, and 2) map the characteristics of various HAR datasets to appropriate ML techniques. From a theoretical perspective, the research will shed light into the strengths and weaknesses of various ML techniques that can provide insights into future research aimed at improving these techniques for HAR. From a practical perspective, the research provides guidance into the applicability of various ML techniques to HAR datasets. Overall, studies into improving HAR performance could lead to a significant improvement in the selfcare and self-management interventions. These improvements would open doors for creative innovations in healthcare and other commercial applications that require the detection of human activity.