Investigating the effect of different feature extraction methods on the accuracy of joint 2D and 3D pose estimation and action recognition.

The objective of this research project is to investigate how various feature extraction methods affect the accuracy of joint 2D and 3D pose estimation and action recognition. The project will involve data collection from diverse datasets, preprocessing to remove noise and artifacts, and feature extraction using methods such as CNNs, RNNs, HOG, and SIFT. A multitask framework will be developed to incorporate the different feature extraction methods, and the accuracy of the framework will be evaluated and compared against benchmark datasets. The analysis will determine the most effective feature extraction methods for joint 2D and 3D pose estimation and action recognition, contributing to the development of more accurate and efficient models for applications such as human-computer interaction, virtual reality, and sports analysis.

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