Artificial Intelligence-based Personal Fitness Trainer

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Abstract: *Human Activity Recognition has emerged as an active research area in recent years. With the advancement in mobile and wearable devices, various sensors are ubiquitous and widely available gathering data from a broad spectrum of peoples" daily life activities. Research studies thoroughly assessed lifestyle activities and are increasingly concentrated on a variety of sports exercises. A fitness trainer can motivate and teach users to do fitness activities. However, using a human fitness trainer may involve high costs and is not suitable for certain individuals. Also due to the number of norms imposed due to the outbreak of Covid, people find themselves unable to carry out the exercise at their convenience due to reasons such as lack of time, lack of motivation, and importantly lack of experts.*

Keywords: Human Activity Recognition, Sport Activities, Mediapipe, OpenCV

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