

Survey On: Human Activity Recognition using OpenCV

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Abstract: *Human Activity Recognition (HAR) is an emerging field in computer vision that aims to automatically identify human actions such as walking, running, sitting, or falling using image and video analysis. This paper presents a comprehensive survey on HAR using OpenCV and machine learning techniques. OpenCV provides powerful tools for image preprocessing, motion detection, and feature extraction that enable accurate activity recognition. The study explores current methodologies, deep learning approaches, and key applications in healthcare, surveillance, and smart homes. It also discusses existing challenges such as occlusion, lighting variation, and real-time performance. The survey concludes by outlining potential research directions, including sensor fusion, deep learning integration, and edge deployment for enhanced HAR performance.*

Keywords: Human Activity Recognition (HAR), OpenCV, Machine Learning, Computer Vision, Real-Time Detection, Deep Learning

