

Human Action Recognition for Postural Assessment

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Abstract: Recognition of human actions and their interactions with the objects in the surrounding environment is an important problem in computer vision due to its potential applications in a variety of domains. This talk focuses on one such application in the form of automated ergonomics risk assessment. In particular, we develop a system for real-time prediction of the ergonomic risks during object manipulation to enable effective human-robot collaboration in logistics and manufacturing facilities. Accordingly, we devise new deep learning-based models and methods for two important aspects of the human action recognition problem, namely, video semantic segmentation and early action recognition, and employ them for ergonomics-driven human postural assessment.

Bio: Behnoosh Parsa is a Ph.D. candidate in the Department of Mechanical Engineering at the University of Washington. Her Ph.D. research focuses on leveraging natural language processing and computer vision algorithms to solve human action recognition and forecasting problems. She received her Master's degree from the Pennsylvania State University in Kinesiology with minors in Mechanical Engineering and Computational Science. Her Bachelor's degree is in Biomedical Engineering with a minor in Industrial Engineering.