

Abstract

Markerless vision-based human motion analysis has the potential to provide an inexpensive and non-obtrusive solution for the interpretation of human body poses. The significant research effort in this domain has been motivated by the fact that many application areas, including surveillance, Human-Computer Interaction and automatic annotation, which would certainly benefit if in the end managed to find a reliable solution in the domain of interpretation of the the human body poses.

In this paper, we discuss the characteristics of human pose by dividing the analysis into feature extraction or modeling and pose interpretation phase. Gabor filters are used for extracting the characteristics of the movement and then as the results, matrix from this process will be converted into vector as input for Support Vector Machine to classify human pose based on human action on the MuHAVi-MAS silhouette dataset.

Test phase on human pose interpretation system is done by observing the number features of training data that used as input for support vector machine. By this system obtained the best result with an accuracy of 91.41% with the parameter $C = 5$ and $\sigma=9.1$ based on data with 48 feature (6 scales and 8 orientations) using Pairwise multiclass method.

Keywords: *interpretation, human pose, support vector machine, gabor filter, surveillance, human-computer interaction.*