A real time human activity recognition system based on Radon transform (RT), Principal Component Analysis (PCA) and Linear Discriminant Analysis (LDA) is presented. RT improves low frequency components and PCA provide global representation of these low frequency components in few eigenvectors. The proposed technique computes radon projections in different directions to obtain directional features of the images from video sequences. PCA is used to reduce the dimensions of radon shape features. LDA is applied on PCA features to provide better class separation. The aim is to develop a proficient recognition system in real time by the combination of local and global features. The dataset consisting of normal and abnormal activities is produced. Artificial Neural Nets (ANN) is used to recognize different human activities in real time. Experimental results show better recognition results for our system as compared to some state of the art methods.
Reference


Index Terms

Computer Science
Artificial Intelligence

Key words

Feature Extraction

Radon Transform
PCA
LDA
ANN