Gait Analysis for Human Identification by using BPNN with LDA and MDA Classifiers

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Authors:
Ira Gaba, Satinder Pal Ahuja

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Abstract

In this paper BPNN performance for the gait analysis with using the different modulation techniques i.e LDA and MDA. Gait Analysis is the new technique in the biometric identification, the gait have more advantages over the field of biometric systems like face recognition, finger printing etc. Gait Analysis is a method by which individual can be recognized by the manner of walk. Less unobtrusive gait recognition system over the other biometric traits is the main advantage. i.e. it offers the identification of an individual at a particular distance, without any physical interference or contact with an individual and can be easily apply on the low resolution image frames as well. In this paper, firstly the video of an individual in captured, secondly background subtraction is applied on that so as to remove the unwanted information, thirdly feature extraction is carried out to extract the various parameters by using the Hanavan’s model, and finally the recognition is performed by using BPNN+LDA and BPNN+MDA techniques, are used for the training and the testing purposes, and the matching can also be performed on the basis of CBIR. All the processes are performed on the gait database and the input video.
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Index Terms

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Keywords

Back-propagation neural network(BPNN),CBIR, Feature extraction, Gait recognition system, linear discriminant Analysis (LDA) and multilinear discriminant analysis(MDA).