Abstract

Face Recognition is a popular application of computer vision in recent years. Not only the computer science researchers, but also the psychologists and neuroscientists are involved in this area. Appearance-based face recognition system includes linear Analysis like PCA, ICA, LDA, and Non-linear analysis is Model-based face recognition like, Elastic Bunch Graph Matching, 2D Morphable Model, 3D Morphable Model etc. In linear Analysis, matching score between the test face image and training images can be achieved by calculating the differences between their projection vectors determined by PCA, ICA or LDA. In nonlinear analysis, a mapping function is required to be applied on data space and then the linear analysis on the mapped data is applied. In this paper, RBFNN, FBNN and KNN classifier algorithms for face recognition using PCA and Rectangular feature have been implemented for the purpose of their comparison. The number of PCA features on different image size has been used along with four rectangular features. The recognition rate of different classifiers has been recorded in different conditions for the comparison.
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Index Terms

Computer Science
Algorithms
Keywords

Face Detection  Face Recognition  Image Processing  Principal Component Analysis

Levenberg-Marquardt Algorithm.