Abstract

The objective of this paper is to develop the Image processing and Face Recognition using Principle Component Analysis and Log-Gabor filter. Face is a complex multidimensional visual model and developing a computational model for face recognition is difficult. Eigenfaces approach is a principal component analysis method, in which a small set of characteristic pictures are used to describe the variation between face images. This paper gives the simple implementation of face recognition using principal component analysis, based on information theory concepts, seek a computational model that best describes a face, by extracting the most relevant information contained in that face. The main advantages of the proposed method are its simple implementation, training, and very high recognition accuracy. we implementing the system to find the locations of Log-Gabor features with maximal magnitudes at single scale and multiple orientations using sliding window -based search and then use the same feature
locations for all other scales. For further feature compression we used Principal Component Analysis (PCA) because its simple implementation, fast training and because using PCA with Euclidean-based distance measure it is possible to achieve similar recognition accuracy like using EBGM and LDA-based recognition methods.

**References**

- Dr. Fuhui Long, Dr. Hongjiang Zhang and Prof. David Dagan Feng, "Fundamentals Of Content-Based Image Retrieval"

**Index Terms**

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**Keywords**

Pca log-gabor Filter sliding Window Based Search euclidean Based Distance Measure