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Research Article

A Novel Face Recognition Approach Using Modular PCA with Neural Networks

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ABSTRACT

Face recognition facilitates a questioning problem in the area of image processing and artificial intelligence. It has achieved a great deal of importance from the last few years because of its uses in various streams. Face recognition techniques can be divided into many categories based on the face data acquisition methodology: methods that deal with images and videos. In this paper, overviews of some of the methods are provided. This paper also mentions an idea of the novel technique that is Face Recognition using Modular PCA with Neural Networks for the efficient face recognition technology. By using the individual PCA method will not provide the accurate recognition rate as it only reduces the dimensionality of the image and fasters the recognition but it cannot solve the illumination problems. Neural networks method alone also gives better accuracy and recognition rate but it cannot determine the expressions of the face. Therefore, by combining PCA with its modules to the Neural networks will give a better performance of face recognition in all aspects.

Keywords: Face recognition system, Principal components Analysis (PCA), Modular PCA Artificial Neural network (ANN), Back Propagation Algorithm.

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