

Chapter

An Improved Face Recognition Method Using Canonical Correlation Analysis

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ABSTRACT

This study completely focused on the face recognition method to detect and match a particular face out of several faces. Face recognition is the most accurate and most commonly used recognition in the world. The security system is most important for the security from all types of criminal activity. In this method, first it converts all the converting training and test photos to greyscale. The entire process is then split into two halves. Face detection is the first, and face identification is the second. For face detection, the study uses the local binary pattern method. After the face detection, to remove the background, the appropriate face is cut out of the original image. So the resolution is 100 × 100 pixels. The second part is image identification. In this system, the study focused on the eigenface and fisherface methods for the identification of face images. MATLAB code is used to calculate the accuracy and efficiency of methods in system database. In both of our techniques, eigenface and fisherface, the work applied feature fusion based on canonical correlation analysis, which also improves the algorithms' accuracy.

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