Abstract

Face recognition plays a vital role in identification and for authentication purpose, in our day to day lives. In real time, this identification must be liable, perfect and faster. In this paper, face recognition approach using wavelet transform and Bayesian model is proposed, where the images have been recognized with minimal time and improved efficiency.
First the original image is decomposed into Low frequency and High frequency sub-band images by applying wavelet transform and then the Bayesian approach is used to find the intrapersonal difference between the images. The Principal Component Analysis algorithm is used to compute the eigenvector space of the face. The face recognition rate was gained through similarity measure using whitening transform.

In this paper, the performance of the proposed method is verified using the databases of face images, taken at different times, varying the lighting, facial expressions and facial details. In the proposed approach, the recognition rate is highly improved and hence it yields better classification compared to the existing approaches.

Reference

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**Index Terms**

Computer Science  
Signal Processing

**Key words**

Face recognition  
Wavelet Transform

Whitening Transform

Bayesian Transform

Principal Component Analysis