The change in facial appearance due to illumination variation degrades face recognition systems performance considerably. In this paper, various states of art illumination normalization techniques have been explained and compared. The classification of the image recognition has been done using artificial neural networks (ANN). We have compared four illumination
normalization methods which are (1) discrete cosine transform (DCT) with rescaling of low frequency coefficients (2) discrete cosine transform (DCT) with discarding of low frequency coefficients (3) homomorphic filtering (HF) (4) gamma intensity correction (GIC). These methods are evaluated and compared on Yale and Yale B Faces databases.

Reference

- Proceeding of the International Conferences on the Automatic Face and Gesture Recognition, 1995-1998
Comparative Analysis of various Illumination Normalization Techniques for Face Recognition


Index Terms

Computer Science
Pattern Recognition

Key words

Discrete cosine transform (DCT) homomorphic filtering (HF)
gamma intensity correction artificial neural networks (ANN)