Abstract

Sparse representation based face recognition is the most recent technique used, this technique first codes a testing sample as a sparse linear combination of all the training samples, and then classifies the testing sample by evaluating which class leads to the minimum representation error. The l1-norm sparsity improves the face recognition accuracy. While most of the research focus has been in increasing the face recognition accuracy, in this paper we analyze the time needed for face recognition under varying Facial expressions, Pose and Illumination. This analysis is done on various public data sets. GRIMACE and ATT data sets provide variations in Facial expressions, SUBJECT data set provides Pose variations and YALEB data set provides 64 illumination conditions. The average time taken is calculated for each of the data set.

References


**Index Terms**

Computer Science

Pattern Recognition
Keywords
Sparse representation  Face recognition  Facial expressions  Pose variations
Illumination conditions