CS663 Project proposal

October 30, 2020

1 Group details

Garaga V V S Krishna Vamsi	180070020
Rishav Ranjan	180070045
Shubham Kar	180070058
Yash Sanjeev	180070068

2 Paper

We are going to implement the paper Belhumeur, Hespanha, and Kriegman 1997 which uses Fisher's Linear Discriminant(FLD) for illumination invariant Face recognition. This method is also insensitive to facial expressions. We will try this algorithm on Harvard and Yale Face databases. We will compare the results of Correlation method, Eigen faces method and other two methods described in the above paper for illumination variation and facial expression variation. Note that here illumination variation includes variation in both intensity and direction of light sources. We measure the recognition error rate for evaluation of performance.

3 Tentative Individual Contribution

Yash Sanjeev	Generation of Fisherfaces and pre-processing of images
Shubham Kar	Generation of Eigenfaces and pre-processing of images
Garaga Vamsi	Linear Subspace Method and Result Comparison
Rishav Ranjan	Correlation Method and Report Furnishing

References

[BHK97] Peter N. Belhumeur, João P Hespanha, and David J. Kriegman. "Eigenfaces vs. fisherfaces: Recognition using class specific linear projection". In: *IEEE Transactions on pattern analysis and machine intelligence* 19.7 (1997), pp. 711–720.