CSE341/541: Advanced Biometrics

Assignment:#1   Deadline: 19 Feb 2018

Note: Plagiarism of any kind is not allowed.

AR Database: https://drive.google.com/open?id=1TRY9Po5StBz5aMaX78yR4B3_ftdYwymI

Report/compare the performance of your algorithms using ROC, CMC, False Positive, False Negative, True Positive, and True Negative metrics (based on the appropriate metrics for following questions).

Q1. Implement any two face detection techniques (non deep learning based) discussed in class to detect the face region in the AR face database.

Q2. Implement two hand-crafted feature extraction algorithms for face recognition (verification and

identification) on AR database:

(a) Perform the face verification experiment. Report the verification accuracy using five-fold cross-validation.

Protocol: Divide the data into five folds. Each time use four folds for training the classifier, and remaining one fold for testing.

(b) Perform the face identification experiment.

Protocol: Divide the data into 50-50% corresponding to each subject. Use one part for training the classifier, and the other half for testing.

Note: Database description is given in countMetaData.csv, readme.txt, and Tejas'sGuideLine.txt. Please read the description carefully before performing experiments.