

Homework Assignment VII

Computer Assignment:

1. Repeat the face-recognition assignment with two types of sparse outliers: random pixel corruptions and random patch corruptions. Again, two algorithms in comparison are:
 - Sparse Representation Classification (SRC).
 - Eigenface or more precisely, Eigenfaces with S -nearest neighbors (S -NN). In other words, based on the S (say $S = 10$) closest matches in the eigenface domain, construct a simple voting scheme to identify the identity of the person.

Plot your classification accuracy as a function of corruption percentage. Any observation?

2. Take a few selfies!!! Pre-process the images to make them match the style and the format of typical images in the Yale B database. Develop a strategy for outlier rejection (i.e., declare that this person does not exist in the database). Demonstrate the effectiveness of your strategy on your selfies.

Due date: **Tues, Apr. 10** in lecture