Q3 - Identity Matching

Mechanism for Matching Identity:

1. For the images in training dataset we calculate the mean and variance of eigencoefficients for every person.
2. For the test image, we calculate the distance between mean in training set of each person and the test image.
3. If the distance is very less, we identify the person. If the distance is greater than twice of variance, we conclude that the test image doesn't belong to the training set.
4. Similarly, when running images of 32 persons 4 images each, we get the false negative as opposed to false positive in the above case.

RESULTS -
K = 30 was chosen as it has best recognition rate as seen in Q1.
False positive = 13 out of 32 images - 40.625%
False negative = 22 out of 128 images - 17.1875%