Computational Vision & Imaging - Lab 5

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In this lab exercise, idea behind face recognition using a dimensionality reduction method cal sked to write a short (no more than 2 pages) report of your work, answering nd showing example images. This work is not assessed (it will not count towa k) but you will get formative feedback.

STEP 1:

- Download the zip file and extract the data files for Lab 5 from CANVAS and save them in your working directory

TASK:

- Work through the matlab script 'eigen_faces.m' that has comments to explain all the steps/

Question 1:

- One line 38 when you plot a face, why is it inverted? Does it matter?

Question 2:

- When we need to calculate PCA for higher resolution we need to think differently on how to improve computational speed! How can we achieve this?

Question 3:

- When you look at each PC, in order of importance, what do you see?

Question 4:

- As you decrease the number of PCs used for face reconstruction, what do you observe?

Question 5:

- Based on the lecture notes, modify the algorithm to allow face recognition.