Assignment no. 9 on PCA

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Hello everyone, Please find the assignment and submit it by given deadline

Assignment 9

Using the face dataset:
https://drive.google.com/drive/u/2/folders/1XGdUi0w_FcHcnlQt9mU5y_PNLyFhCW9V
Design a face recognition system using Python.

Hints: refer video lectures on ML: 42-44

Use of following libraries are allowed:

· Numpy, Scipy for matrix multiplication , finding SVD or Eigenvector etc.
· OpenCV- Python library for inputting/reading images etc.

For step by step directions you may use the following link from my website. https://docs.google.com/a/
iiita.ac.in/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxnY25hbm
RpfGd4OjQzYjVhZTAwYTdmYjBmNjc

Take 60% data as training set and 40 % data as test set, evaluate your classifier on the following Factors:
a) Change the value of k and then, see how it changes the classification accuracy. Plot a graph
between accuracy and k value to show the comparative study.
b) Add imposters (who do not belong to the training set) into the test set and then recognize it as
the not enrolled person.

Marks: 50
Deadline: 18-04-2021

All the best
Priya Shukla