

## CS663: Assignment 4 - Q2

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Q. Reconstruction of any one face image from the training dataset and visualization of first 25 eigenfaces.

### Results

Reconstruction of an image for various value of principal components.  $k = [2 \ 10 \ 20 \ 50 \ 75 \ 100 \ 125 \ 150 \ 175]$   
The 1st image corresponds to the  $k = 1$  and last image corresponds to  $k = 170$  and the inbetween images are arranged accordingly.

We can also see from the results that how PCA can be implemented for denoising of an image.

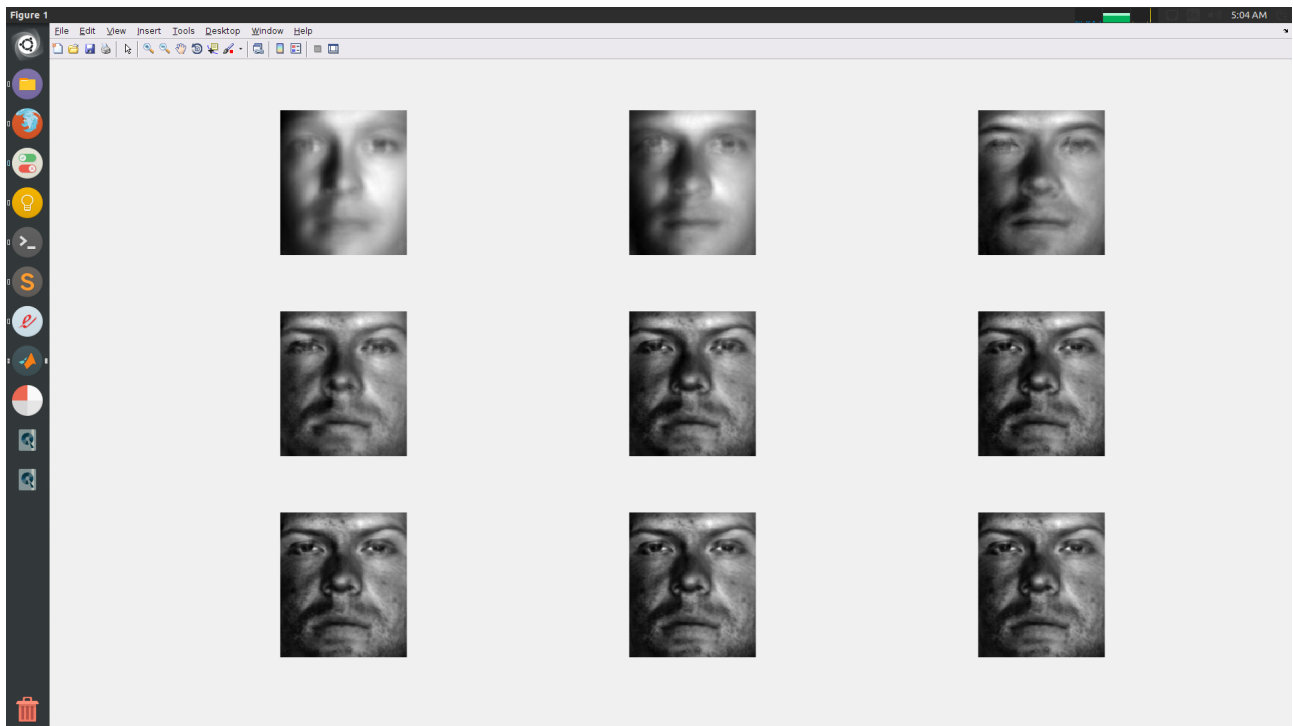


Figure 1: Reconstructed image for various value of principal components)

Top 25 eigenfaces

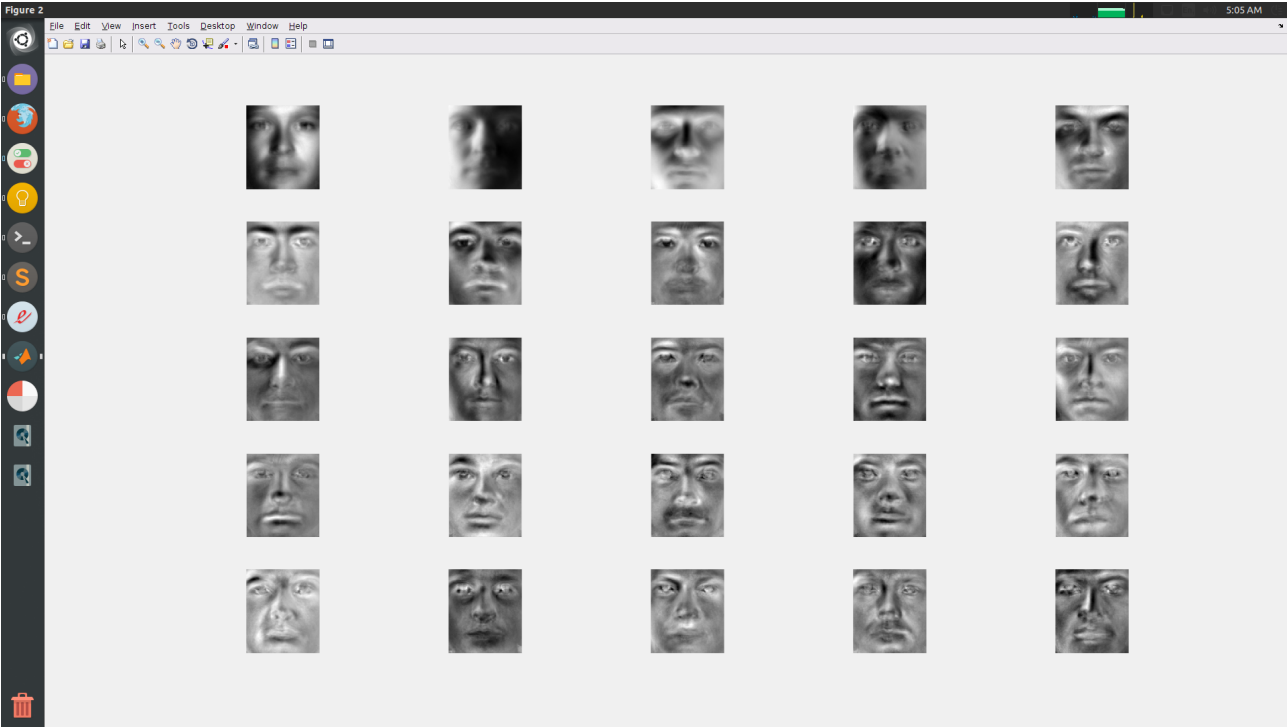


Figure 2: first 25 eigenfaces