# **Programming Assignment 1**

(Implementation of PCA)

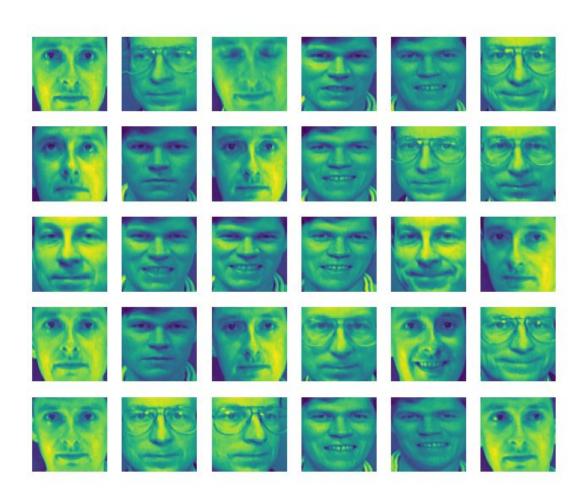
## **Group Members**

Mandeep Bawa (170030038) Anubola Sai Abhinay(180010006)

## **Results from the Implementation**

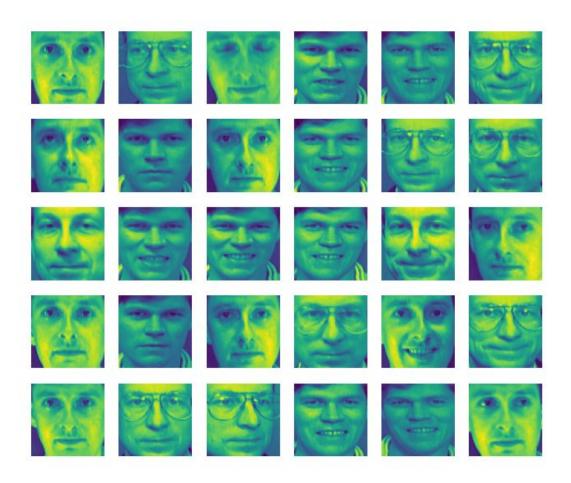
Original Images provided

Original Images



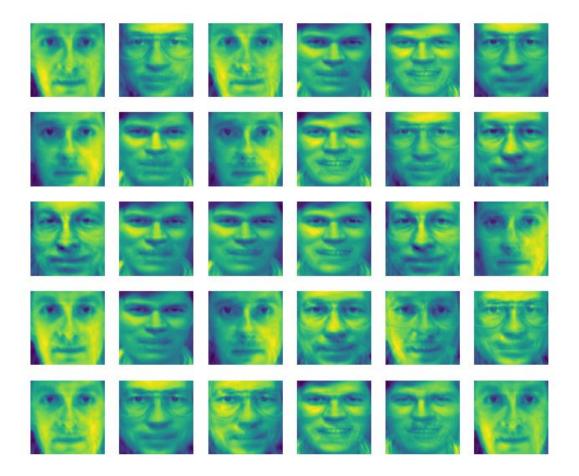
• Image Constructed using 4096 components

## Decompressed Images



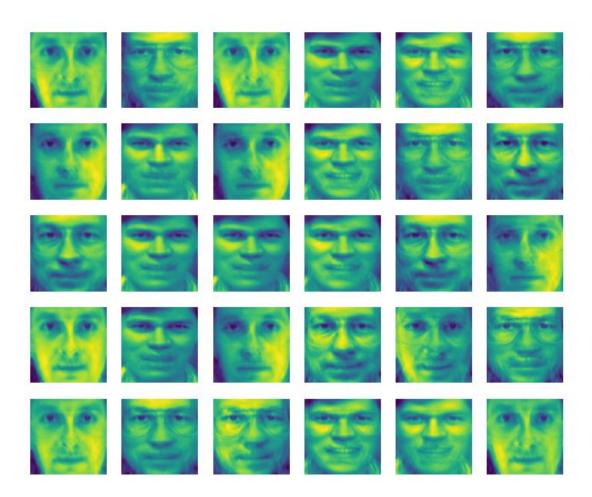
• X (for which faces are discernible) = 5

## Decompressed Images



• Images for value X = 4

## Decompressed Images



### **Choosing Value X**

- Comparison were made on basis of image (3rd row, 1st column)
- When X >= 5 this face looks aged
- On X < 5 face looks young

### **Another Observation**

- Eyes in image (1st row, 3rd column) are open in the original image but closed in the decompressed images.
- On X > 20, eyes are closed in that image
- It does not affect value of X as faces are still discernible at X = 5

#### **Link for Code**

Github Link: <a href="https://github.com/Mandeep3838/Data-Science/tree/master/PA1">https://github.com/Mandeep3838/Data-Science/tree/master/PA1</a>