Student's Name: Madhur Jajoo
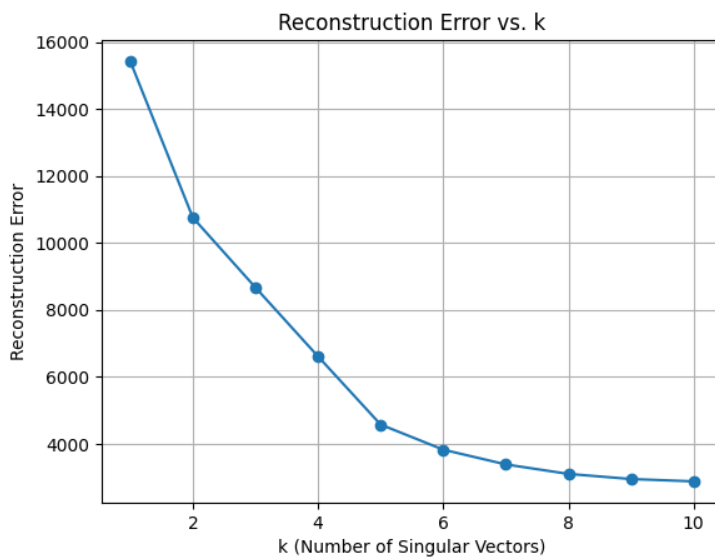
Roll Number: B20211

Mobile No.: 7597389137

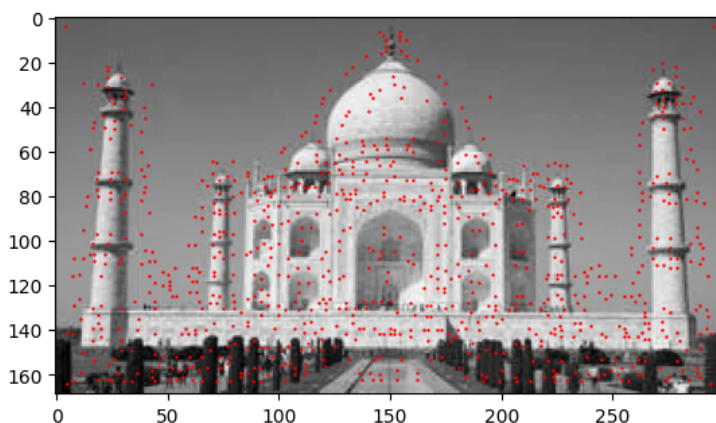**Branch:** Data Science and Engineering

1   Question 1

Output :

2   Question 2

2.1   Harris Corner Detection

Output :

2.2   8 Point Algorithm

Matrix: *0.51426074, 0.65288308, 0.09215054,*
4.8327283, -1.26928134, 11.41565592,
-1.94862643, -3.22711365, 0.72396076

3   Question 3

For this question I have used celebA dataset I have taken images of 7 actor, actress selected randomly. for the non face images I have taken images of Cars.

The LBP have been implemented in the code, The Accuracy of single face multiclass face data using 0ne vs rest svm classifier is

SVM Test Accuracy: 0.21

Low accuracy can be a result of less training data available, faces of actors are different in images, some images have beard some doesn't, the feature learning of SVM might be affected because of that data.

In the face vs non face svm classifier the Accuracy is 0.6578

4   Question 4

In this question I have used a dataset which have human and non-human images, the dataset is downloaded from the kaggle, name of dataset "human detection data".

5   Question 5

The kernels were made in teh code, but were not plotted in time as the computational time was too much, which eventually led to VSCode crash

Dataset