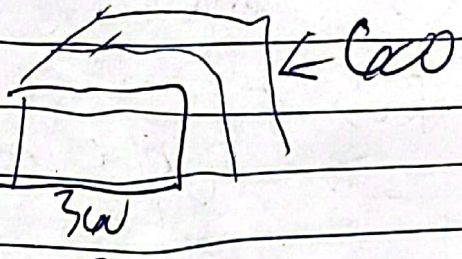
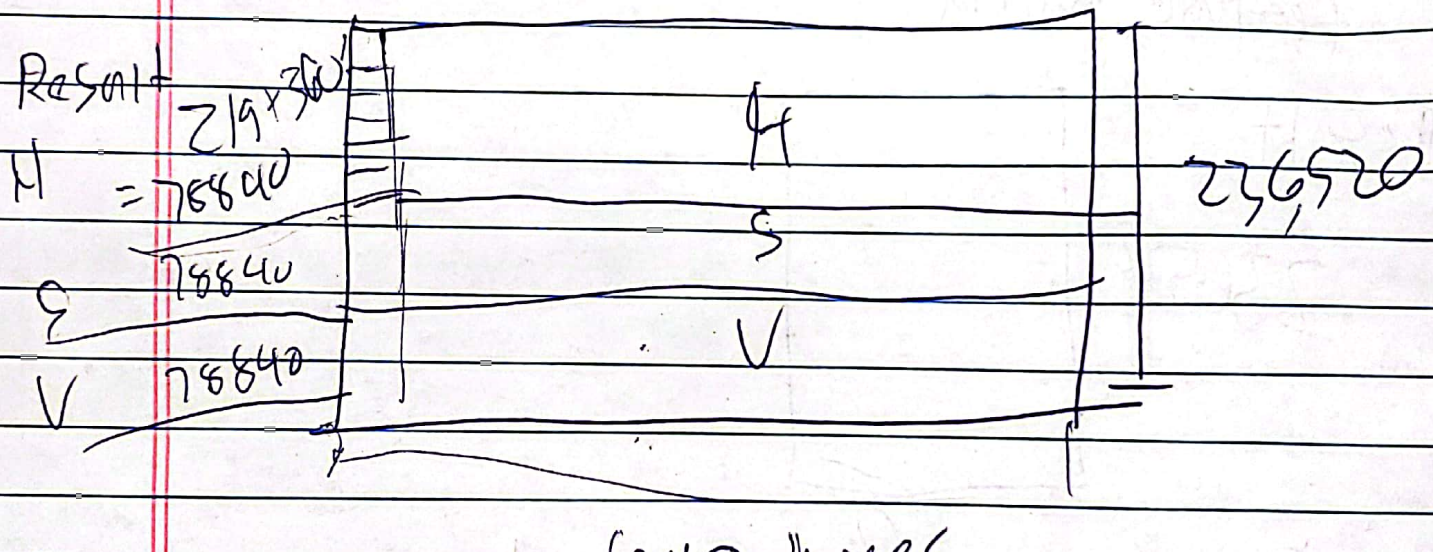
PCA

① ~~Normalize the~~ Standardize

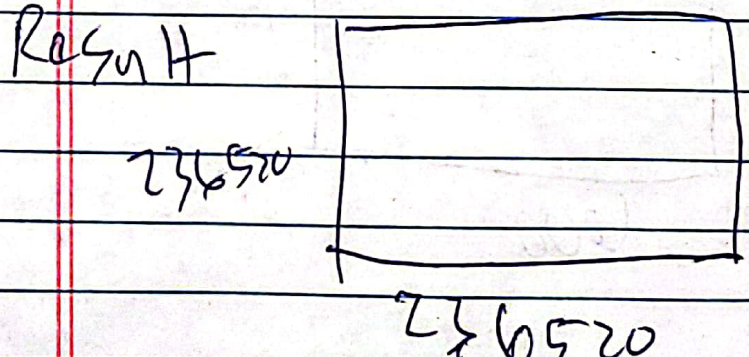


② Read list of images into PCA values

③ & flatten a image into 1D array and append the



④ Calculate Covariance matrix



(5) Compute Eigen values and eigen vectors

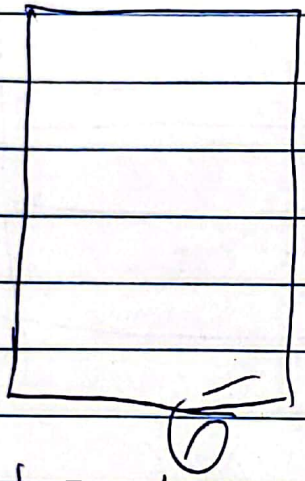
Result

=> 236520 eigenvalues & eigenvectors

(6) Order eigenvector based on numeric value of corresponding eigenvalues, ~~get~~ only keep first 6 and discard the rest, form feature matrix

Result

236520



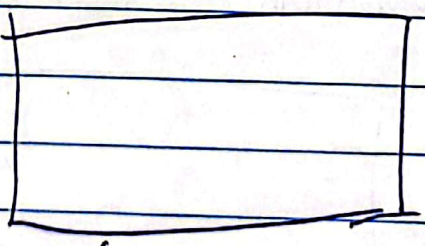
6

(7) Recast the data along the axis

Final Data

6

236520



6000

⑧ Take out 1 column in recasted matrix
and recreate the

⑧ Upload observed data

⑨ Recover 1 image and fit it using Gaussian Process

$x =$ range(0, 360, 1000)

1000 equally spaced points from 0, 360

$y =$ observed data [ ] 360

$X = \phi^{219 \times 3}$ [ ] 360