|  |  |
| --- | --- |
| Sigma | accuracy |
| .01 | .72 |
| .05 | .72 |
| .2 | .72 |
| 1.5 | .64 |
| 3.2 | .64 |

With K = 5

With K = 9

The results appear to show that increasing sigma reduces accuracy, I think with K=9 the only reason it doesn’t continuously decrease is because of overfitting on a small dataset

|  |  |
| --- | --- |
| Sigma | accuracy |
| .01 | .72 |
| .05 | .6 |
| .2 | .6 |
| 1.5 | .68 |
| 3.2 | .68 |

2.1

A screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generated

Screenshots from image T

2.1b

A blurry image of a person's face

Description automatically generated

You can see the outline of a face in this resulting image m, however it is very blurry and a rough outline at best

2.1c

A black and white grid

Description automatically generatedA black and white textured background

Description automatically generated

Snippets from covariance matrix

2.1d

K = 251 for amount of eigen values to maintain variance of 95%

2.1e

Dimensions of U [320, 251]

I don’t think I did the eigen faces right as they are very small and do not resemble faces at all

Here are the nine eigen faces I captured, put together



As you can see it is a very small image and I don’t think that it is correct