

Jared Kinneer 4396828

Ps5 report

With $K = 5$

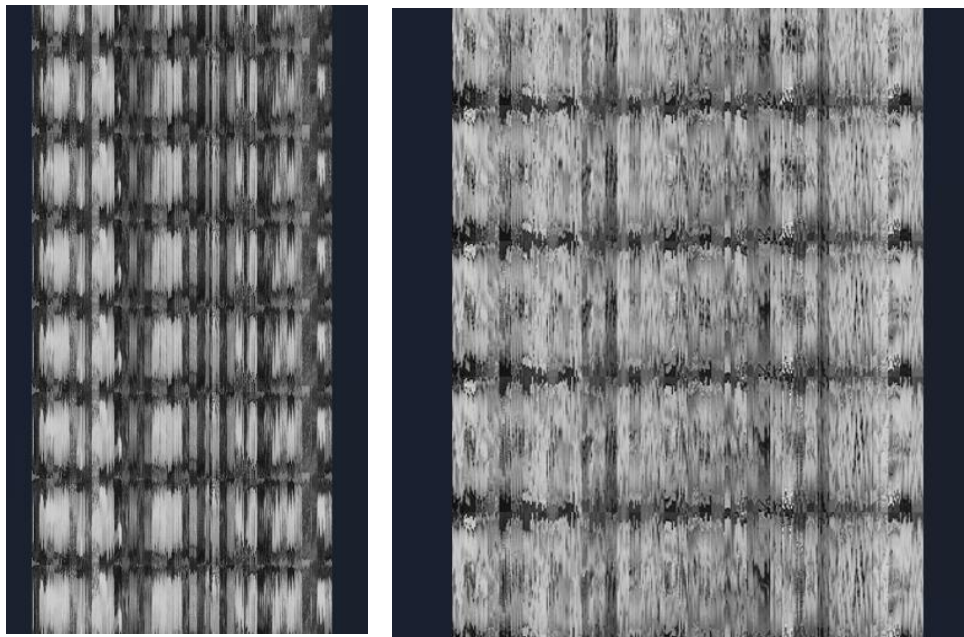
Sigma	accuracy
.01	.72
.05	.72
.2	.72
1.5	.64
3.2	.64

With $K = 9$

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

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

2.1



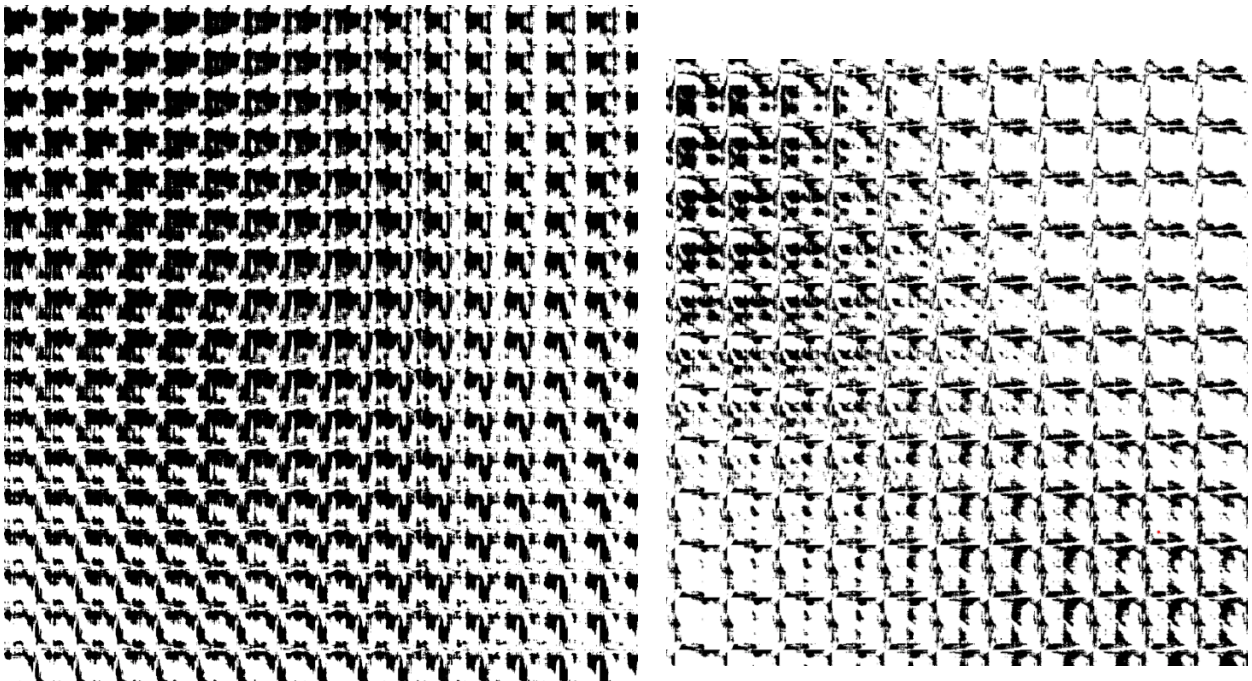
Screenshots from image T

2.1b



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



Snippets from covariance matrix

2.1d

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

2.1e

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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