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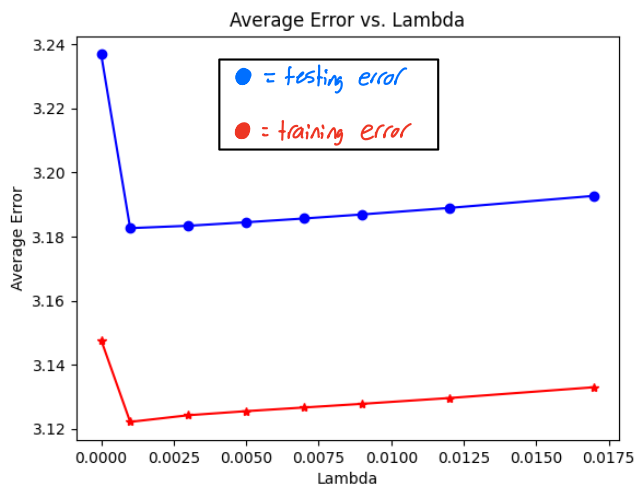
ECE 1395

Homework 4

1b)

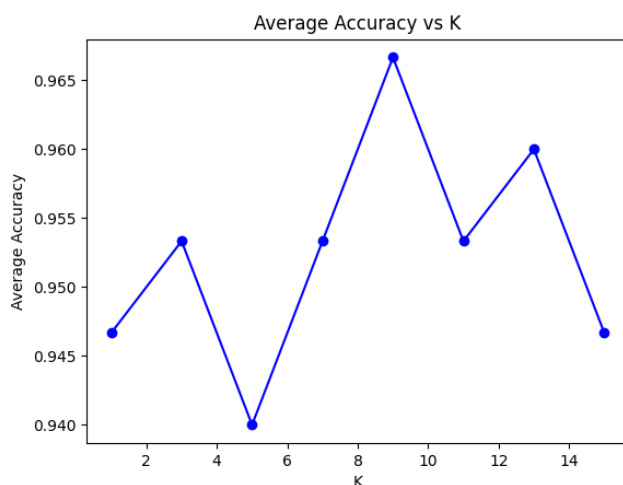
X has 501 features and 1001 data points.

1c)



$\lambda = 0.001$ is what I would suggest since it has the lowest cost in the testing set.

2a)



I would choose $K=9$. No, this is not robust for other problems because they would have different feature & data amounts, which throw off the Classifier.

3b)

	Dataset	Accuracy
0	Training	0.936
1	Testing	0.840

It looks like the model is overfit, since the training accuracy is higher than the testing accuracy. It may need more regularization or data.