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Report 4

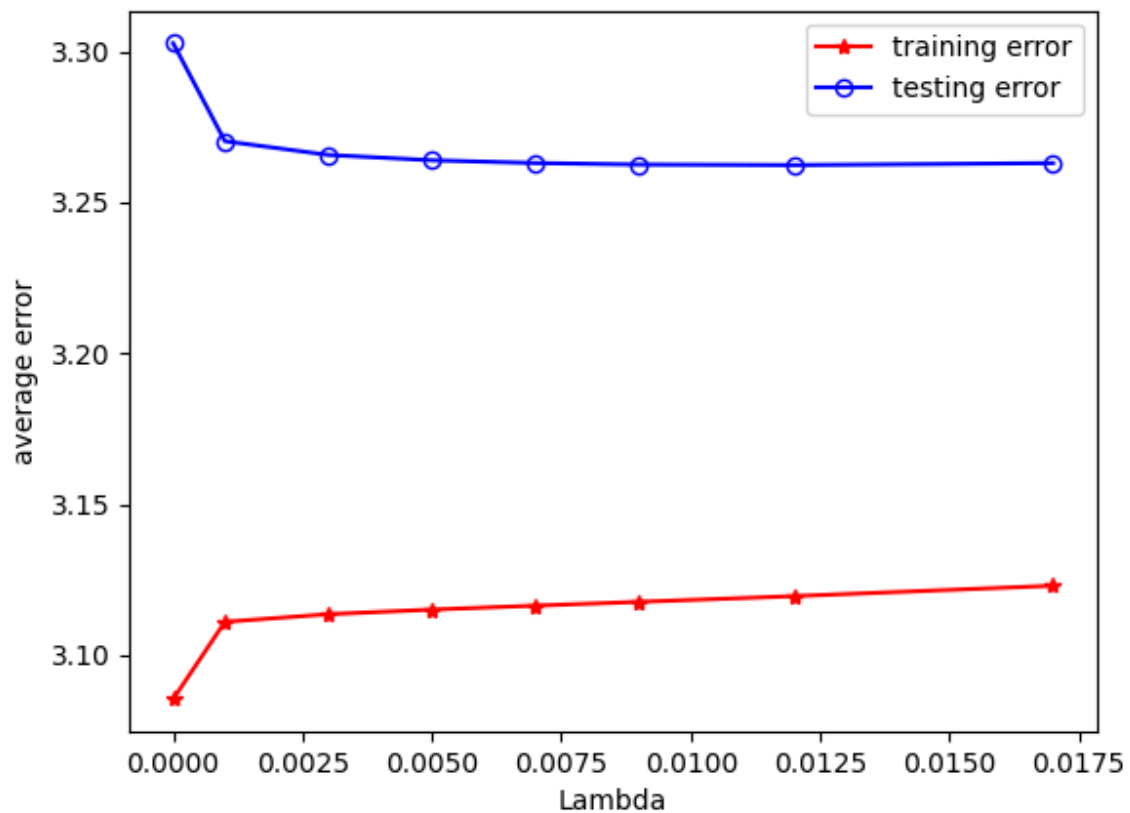
Question 1

Part b)

Text output:

The size of the feature matrix is (1001, 501)

Part c)

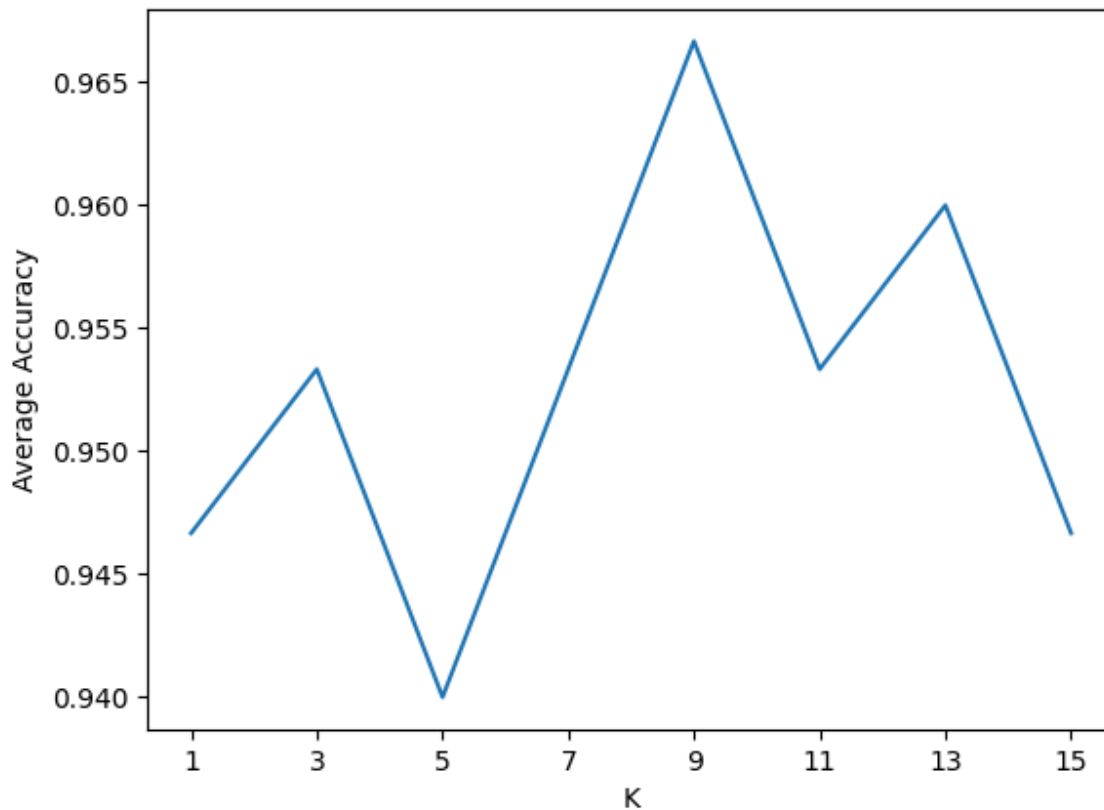


Text output:

The suggested lambda is: 0.012

Question 2

Part a)



Text output:

A K value of 9 is suggested for this problem as it gives the highest accuracy. No this value is not robust as the best K value is problem dependent. This method could be used to find a good value for K for another problem but it would not be the same

Question 3

Part b)

+-----+-----+-----+		+-----+-----+-----+	
Training Accuracy		Testing Accuracy	
+=====+=====+=====+		+=====+=====+=====+	
0.936		0.84	
+-----+-----+-----+		+-----+-----+-----+	

The training accuracy is higher as it passes the data used to train it back at it but it is not 100% as there are still outliers. The testing accuracy is also high but not as high as this is new data the trainer hasn't seen.