

Analysis for Project 4B

Ishan Arya

QUESTION 5

	<i>Max</i>	<i>Average</i>	<i>Standard Deviation</i>
Pen	0.90938	0.90377	0.00463
Car	0.99500	0.98400	0.00860

QUESTION 6

Increasing the number of perceptrons in the neural network appears to significantly improve accuracy of our model up until 5 perceptrons. After 5 perceptrons, the accuracy seemed to make very slight improvements before leveling off. For pen tests, the accuracy grows more consistent with more perceptrons, as seen by the general lowering of standard deviation, though—again—this is very miniscule.

# of Perceptrons		<i>Max</i>	<i>Average</i>	<i>Standard Deviation</i>
0	Pen	0.000000	0.000000	0.000000
	Car	0.670000	0.670000	0.000000
5	Pen	0.863065	0.838879	0.013401
	Car	0.985000	0.974000	0.005831
10	Pen	0.894511	0.886221	0.005817
	Car	0.990000	0.983000	0.006000
15	Pen	0.940252	0.904517	0.019603
	Car	0.975000	0.970000	0.005477
20	Pen	0.911092	0.906632	0.003227
	Car	0.985000	0.971000	0.008000
25	Pen	0.906232	0.902859	0.002367

	Car	0.970000	0.959000	0.006633
30	Pen	0.907947	0.901372	0.006221
	Car	0.970000	0.964000	0.004899
35	Pen	0.905946	0.899200	0.008038
	Car	0.975000	0.960000	0.007746
40	Pen	0.907090	0.904403	0.002050
	Car	0.975000	0.960000	0.010954

Average Accuracy v. # of Perceptrons

