Programming Exercise 4:

Multi-class Classification and Neural Networks

Machine Learning

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Question (1) **(40 points)**

Please compute the minimum cost found by **fmincg** function for all digits:

(Please list the answer in order: 1, 2, 3 ... 9, 0)

Minimum cost =

[ 0.013695

0.057253

0.063739

0.035959

0.061867

0.021667

0.033565

0.084659

0.082246

0.009894 ]

Question (2) **(30 points)**

Please compute the training set accuracy using one-vs-all logistic regression method:

Training set accuracy = 95.060000%

Question (3) **(40 points)**

Please compute the training set accuracy with neural networks:

Training set accuracy = 97.520000%