CSE 574 Project 2

Team number:

Jiabao Yao 50602483

Han Li 50593977

# Explanation with of how to choose the hyper-parameter for Neural Network

1. NN

During initial debugging, a grid search approach was employed to identify the optimal parameters. We began by exploring a broad range for n\_hidden ([0, 60] with step size 4) and lambdaval ([0, 60] with step size 10). Notably, with a fixed lambdaval, the training time for the neural network does not exhibit a linear relationship with the number of hidden units. Instead, the time consumption rises rapidly at first and then levels off.

A graph with blue lines and numbers

Description automatically generated

As n\_hidden and lambdaval increase, the model's accuracy quickly converges, reaching its peak when n\_hidden is 44 and lambdaval is 0A blue and yellow chart with white text

Description automatically generated

A black screen with white text

Description automatically generated