CPSC 501 Assignment 2

Report

Part 1

Hyper-parameter changes

For hyper-parameters, the optimizer was changed from sgd to adam, and the number of epochs was increased from 1 to 10. Changing the optimizer from sgd to adam improved the accuracy by a large margin. Additionally, Increasing the number of epochs gave more training by repeating the input, improving the accuracy. It wasn't increased further as there was no visible improvement after 10 epochs.

Model changes

For model, between the input layer and the output layer, a hidden layer was implemented. This was so that the layer may find features and the AI accuracy would improve. The hidden layer has a density of 450 as it had the best performance.

Results

The resulting model provides the accuracy of training data is around 99.5% and the accuracy of testing data is around 98%, which is much higher than the original accuracy of around 88% on testing data.