FFR135-ANN-Home Assignment 3-Arshad Nowsath

Convolutional Networks (2020)
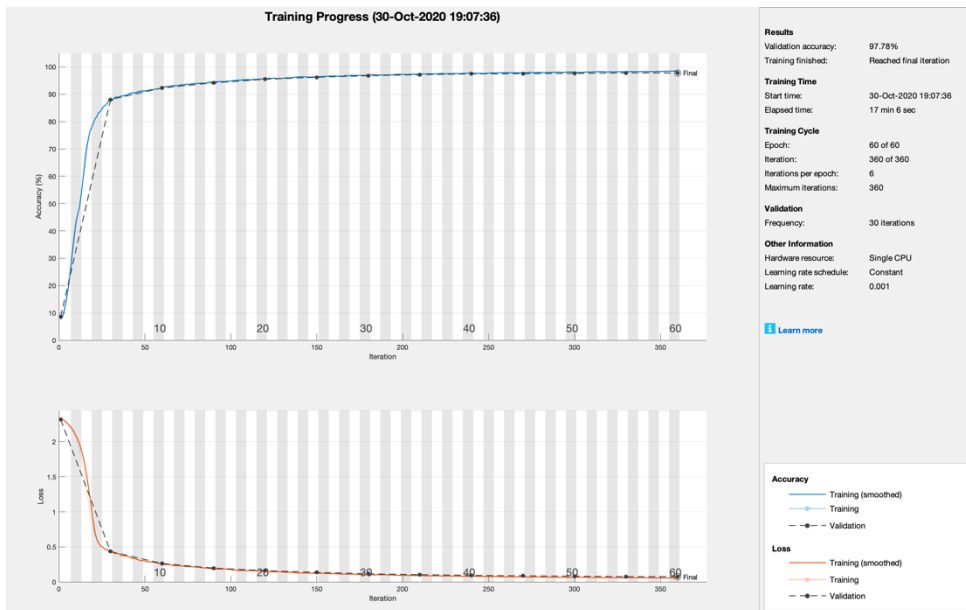

Figure 1: Accuracy, Loss vs Iteration Plot for Network 1
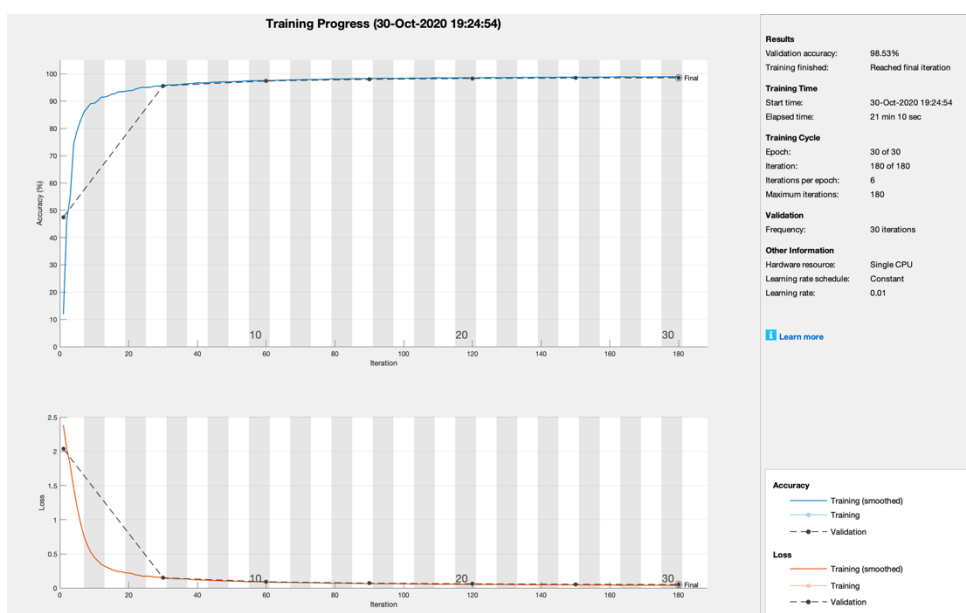
Network 1	60
Network 2	30

Table 1: Number of training epochs

Figure 2: Accuracy, Loss vs Iteration Plot for Network 2

Network Dataset	Network1	Network2
Training	0.0162	0.0112
Validation	0.0222	0.0147
Test	0.0191	0.0126

Table 2: Classification errors

Discussion:
- From the plots it is clear that Network 2 is the most effective in terms of accuracy and also that classification error in network 2 is less compared to network 1.
- The network 2 performance is based on the architecture of the network with 3 convolutional layer and 2 Max pooling layers (before entering to next layer, the ReLu function rectify the activation after each hidden layer)
- Because of the structure the SoftMax and classification layers produce a better network and helps to give good validation accuracy in network 2.
- The Classification errors obtained on training, validation and test sets are highlighted in Table2.
- The validation accuracy on network 1 is 97.78% while on network 2 is 98.53%.