

Theory and Practice of Deep Learning  
Keshigeyan Chandrasegaran – 1002327  
Coding Homework Week 3 Report

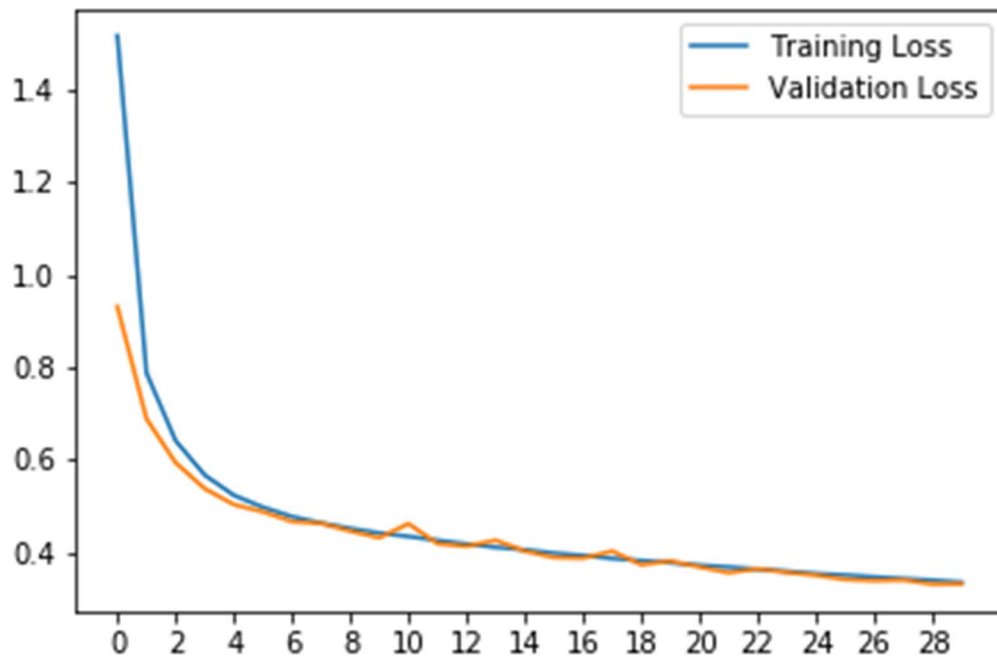
The entire problem was solved using the following setup and hyper-parameters:

Train/ test split = 80%/20%

batch\_size = 64 (for all train, validation and test sets)

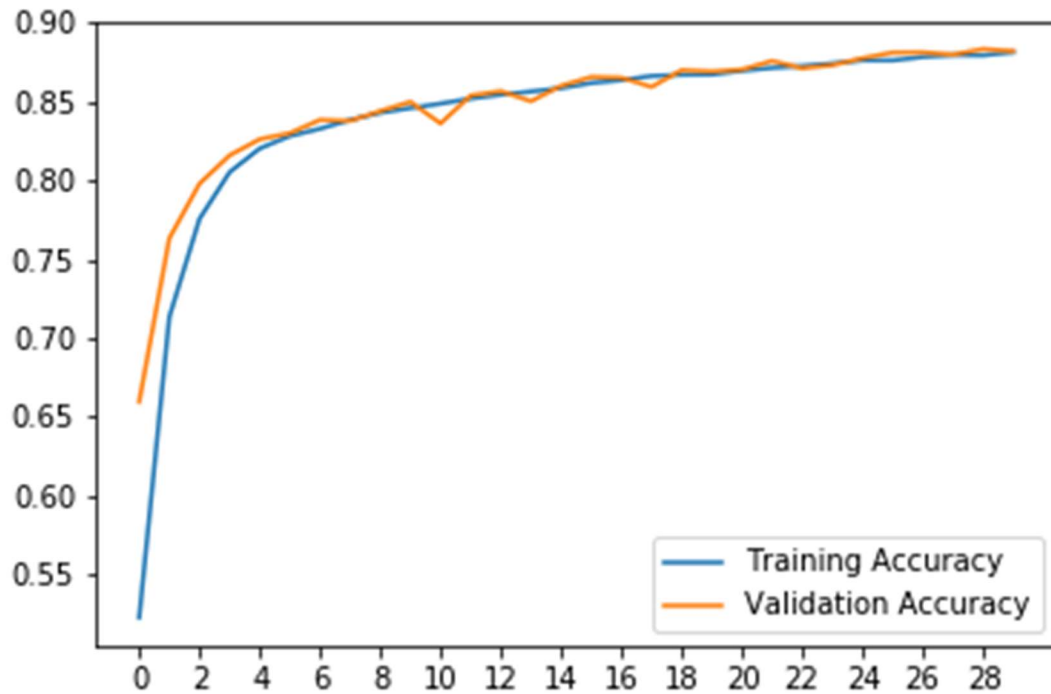
epochs = 30

1. The following graph shows the training loss and validation loss over epochs



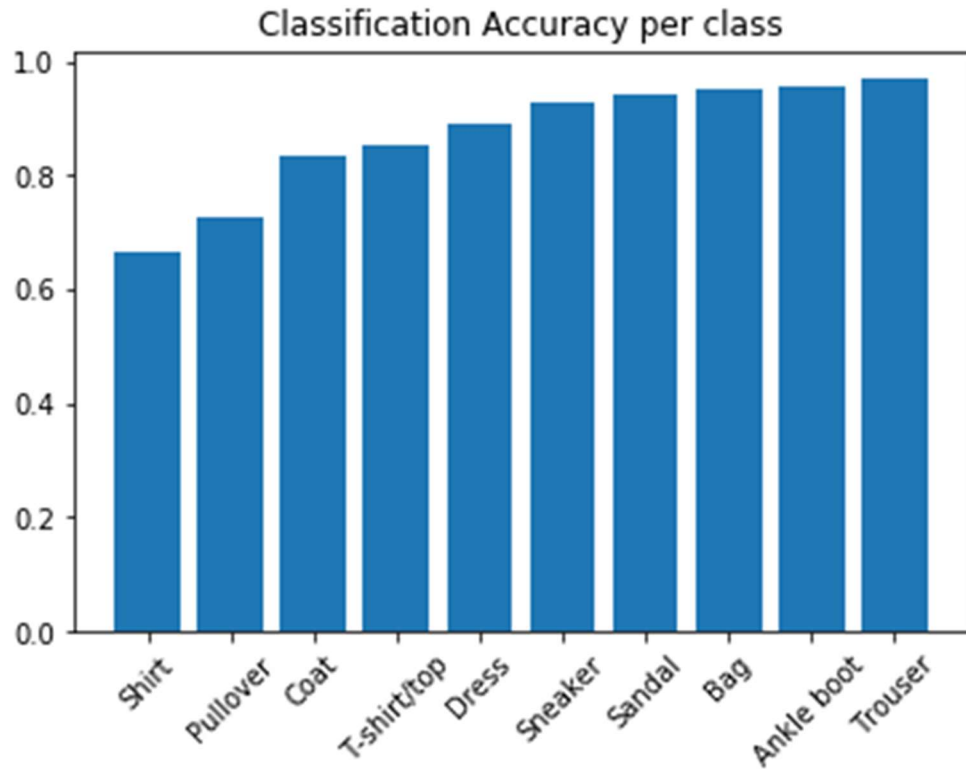
2. The following graph shows the training accuracy and validation accuracy over epochs

Theory and Practice of Deep Learning  
Keshigeyan Chandrasegaran – 1002327  
Coding Homework Week 3 Report



3. The best accuracy on the test set = 0.871
4. The following bar chart shows the ranking of classes by their accuracies in ascending order. The most difficult class to predict is **SHIRT**. The numerical values of accuracy are shown in the table below as well.

Theory and Practice of Deep Learning  
Keshigeyan Chandrasegaran – 1002327  
Coding Homework Week 3 Report



Class	Accuracy
Shirt	0.66750
Pullover	0.72525
Coat	0.83481
T-shirt /Top	0.85126
Dress	0.88803
Sneaker	0.92924
Sandal	0.94349
Bag	0.94891
Ankle boot	0.95548
Trouser	0.96964