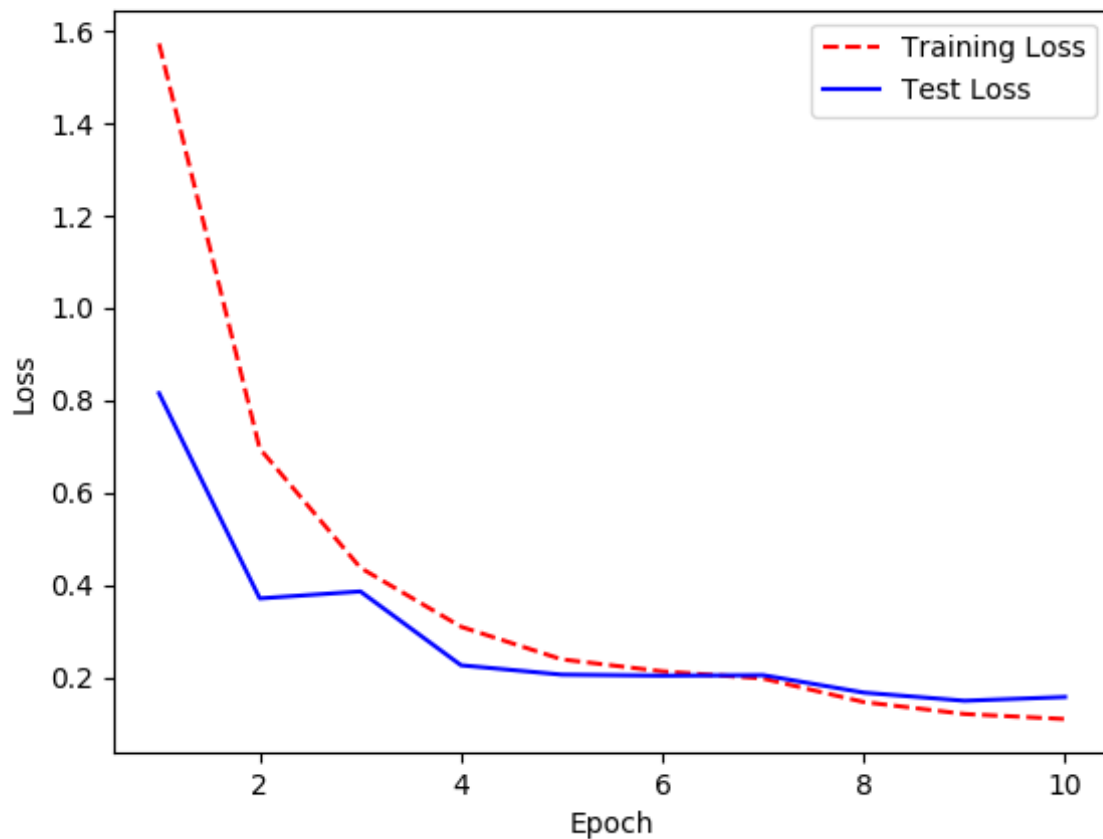


I use Keras for Lab5.

Task 1:



Task 2:

```
Train on 2000 samples, validate on 500 samples
Epoch 1/10
2000/2000 [=====] - 4s 2ms/step - loss: 1.7036 - accuracy: 0.4160 - val_loss: 0.7752 - val_a
ccuracy: 0.7280
Epoch 2/10
2000/2000 [=====] - 4s 2ms/step - loss: 0.8260 - accuracy: 0.7355 - val_loss: 0.4080 - val_a
ccuracy: 0.8820
Epoch 3/10
2000/2000 [=====] - 4s 2ms/step - loss: 0.5368 - accuracy: 0.8360 - val_loss: 0.3179 - val_a
ccuracy: 0.8980
Epoch 4/10
2000/2000 [=====] - 4s 2ms/step - loss: 0.4102 - accuracy: 0.8810 - val_loss: 0.2830 - val_a
ccuracy: 0.9120
Epoch 5/10
2000/2000 [=====] - 5s 3ms/step - loss: 0.2936 - accuracy: 0.9140 - val_loss: 0.2285 - val_a
ccuracy: 0.9340
Epoch 6/10
2000/2000 [=====] - 4s 2ms/step - loss: 0.2442 - accuracy: 0.9275 - val_loss: 0.1882 - val_a
ccuracy: 0.9480
Epoch 7/10
2000/2000 [=====] - 4s 2ms/step - loss: 0.2032 - accuracy: 0.9385 - val_loss: 0.1826 - val_a
ccuracy: 0.9520
Epoch 8/10
2000/2000 [=====] - 5s 3ms/step - loss: 0.1683 - accuracy: 0.9455 - val_loss: 0.1637 - val_a
ccuracy: 0.9560
Epoch 9/10
2000/2000 [=====] - 4s 2ms/step - loss: 0.1513 - accuracy: 0.9535 - val_loss: 0.1773 - val_a
ccuracy: 0.9480
Epoch 10/10
2000/2000 [=====] - 4s 2ms/step - loss: 0.1298 - accuracy: 0.9580 - val_loss: 0.1367 - val_a
ccuracy: 0.9640
```

My final test accuracy is 95.80%.