

Experiment 3

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J023

BTech Data Science 3rd Year Deep Learning Lab(J2)

1. rmsprop

acc: 0.9966 - val_loss: 0.1012 - val_acc: 0.9804

2. Stochastic gradient descent

acc: 0.9999 - val_loss: 0.0786 - val_acc: 0.9854

3. RMSProp

acc: 0.9986 - val_loss: 0.1459 - val_acc: 0.9807

4. Adagrad

acc: 1.0000 - val_loss: 0.1091 - val_acc: 0.9839

5. Adadelta

acc: 1.0000 - val_loss: 0.1116 - val_acc: 0.9842

6. Adam

acc: 0.9979 - val_loss: 0.0977 - val_acc: 0.9834

7. Adamax

acc: 1.0000 - val_loss: 0.1092 - val_acc: 0.9861

8. Nesterov Adam

acc: 0.9945 - val_loss: 0.1665 - val_acc: 0.9726

Conclusion :

After doing this experiment we see that the best optimiser for this dataset is **Nesterov Adam** and the worst ones being **rmsprop**.

Using the best optimiser(Nesterov Adam) we try and improve accuracies of other datasets:

1. fashion_mnist

acc: 0.9214 - val_loss: 0.3430 - val_acc: 0.8857

2. Cifar10

acc: 0.1000 - val_loss: 14.5063 - val_acc: 0.1000

3. Cifar100

acc: 0.2686 - val_loss: 3.3171 - val_acc: 0.2208

4. Iris

loss: 0.0536 - acc: 0.9797