

With Momentum

Nodrop:

learning_rate=0.01, n_epochs=200, nkerns=[32,32,64],batch_size=20, verbose=True, fileName
='predictions_p_0.8_Dropout_noscale_nocrop_mnist',fullyconnected=128,activation=relu

Best validation score of 37.925000 % obtained at iteration 43200, with test performance
39.830000 %

The training process for function test_lenet3 ran for 15.73m

learning_rate=0.01, n_epochs=200, nkerns=[32,32,64],
batch_size=20, verbose=True, fileName =

'predictions_p_0.8_Dropout_noscale_nocrop_mnist',fullyconnected=500,activation=relu
Best validation score of 35.620000 % obtained at iteration 36000, with test performance
37.680000 %

The training process for function test_lenet3 ran for 20.29m

DropOut:

learning_rate=0.01, n_epochs=200, nkerns=[32,32,64],
batch_size=20, verbose=True, fileName =

'cifar_dropout',fullyconnected=128,activation=relu

The training process for function test_dropout3 ran for 24.36m

Best validation score of 48.760000 % obtained at iteration 42750, with test
performance 49.490000 %

learning_rate=0.01, n_epochs=50, nkerns=[64,128,128],
batch_size=20, verbose=True, fileName =

'cifar_dropout',fullyconnected=500,activation=relu

The training process for function test_dropout3 ran for 21.89m

Best validation score of 43.920000 % obtained at iteration 101250, with test
performance 45.580000 %

learning_rate=0.01, n_epochs=50, nkerns=[64,128,128],
batch_size=20, verbose=True, fileName =

'cifar_dropout',fullyconnected=500,activation=relu

Best validation score of 37.260000 % obtained at iteration 101250, with test
performance 39.320000 %

The training process for function test_dropout3 ran for 23.79m

learning_rate=0.01, n_epochs=50, nkerns=[64,128,128],
batch_size=20, verbose=True, fileName =

'cifar_dropout',fullyconnected=500,activation=relu

The training process for function test_dropout3 ran for 21.11m

Best validation score of 35.980000 % obtained at iteration 99000, with test
performance 38.600000 %

DropConnect:

learning_rate=0.01, n_epochs=200, nkerns=[64,128,128],

batch_size=20, verbose=True, fileName =

'predictions_p_0.8_Dropout_noscale_nocrop_mnist',fullyconnected=500,activation=
relu

Epoch 8 -> 46.8%

The training process for function test_dropconnect3 ran for **378.65m**

Best validation score of 45.540000 % obtained at iteration 123750, with test
performance 47.480000 %

learning_rate=0.01, n_epochs=200, nkerns=[32,32,64],

batch_size=20, verbose=True, fileName =

'predictions_p_0.8_Dropout_noscale_nocrop_mnist',fullyconnected=64,activation=r
elu

Without Momentum:

DropConnect

0.1

Epochs 15

64 128 128

Batch size 20

Act relu

Fully 128

p=0.5

Testerror 44.58

125.51 mins

0.1

64 128 128

Batch size 20

Act relu

Fully 128

p=0.5

Testerror 42.31 (@epoch 18 at the time of submission)

125.51 mins