**fashion data**

normal run:

step 0, training accuracy 0.08

step 100, training accuracy 0.8

step 200, training accuracy 0.8

step 300, training accuracy 0.7

step 400, training accuracy 0.82

test accuracy **0.8177**

Time for building convnet:

176411

adagrad optimizer:

step 0, training accuracy 0.1

step 100, training accuracy 0.16

step 200, training accuracy 0.32

step 300, training accuracy 0.52

step 400, training accuracy 0.42

test accuracy 0.5354

Time for building convnet:

201409

Gradient descent optimizer:

step 0, training accuracy 0.2

step 100, training accuracy 0.28

step 200, training accuracy 0.34

step 300, training accuracy 0.34

step 400, training accuracy 0.44

test accuracy 0.4465

Time for building convnet:

168809

**Filter 16,36 and final filter size 128**

step 0, training accuracy 0.06

step 100, training accuracy 0.62

step 200, training accuracy 0.66

step 300, training accuracy 0.66

step 400, training accuracy 0.82

test accuracy **0.7547**

Time for building convnet:

29526

Adagrad:

step 0, training accuracy 0.14

step 100, training accuracy 0.1

step 200, training accuracy 0.06

step 300, training accuracy 0.3

step 400, training accuracy 0.24

test accuracy **0.2888**

Time for building convnet:

30067

Gradient Descent:

step 0, training accuracy 0.12

step 100, training accuracy 0.08

step 200, training accuracy 0.12

step 300, training accuracy 0.18

step 400, training accuracy 0.18

test accuracy **0.1681**

Time for building convnet:

31428