HW5-Results

1. Make a graph of test loss curve with MATLAB on MNIST-1459

   Output:

   Training…

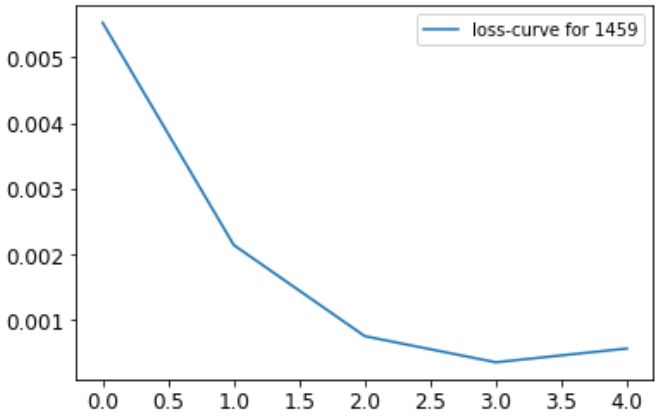
   0 Train accuracy: 0.980161 Test accuracy: 0.983574

   1 Train accuracy: 0.99056 Test accuracy: 0.993031

   2 Train accuracy: 0.992885 Test accuracy: 0.994276

   3 Train accuracy: 0.993798 Test accuracy: 0.993778

   4 Train accuracy: 0.994482 Test accuracy: 0.993529



2. Make two graphs of test loss curve with MATLAB on MNIST-023678 (two conditions)

   Without Freezing weights:

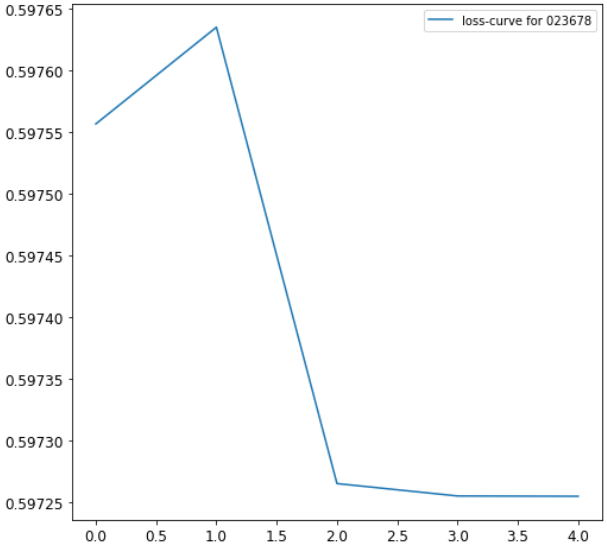
   0 Train accuracy: 0.963656 Test accuracy: 0.963223

   1 Train accuracy: 0.968978 Test accuracy: 0.96991

   2 Train accuracy: 0.9821 Test accuracy: 0.981444

   3 Train accuracy: 0.986363 Test accuracy: 0.984119

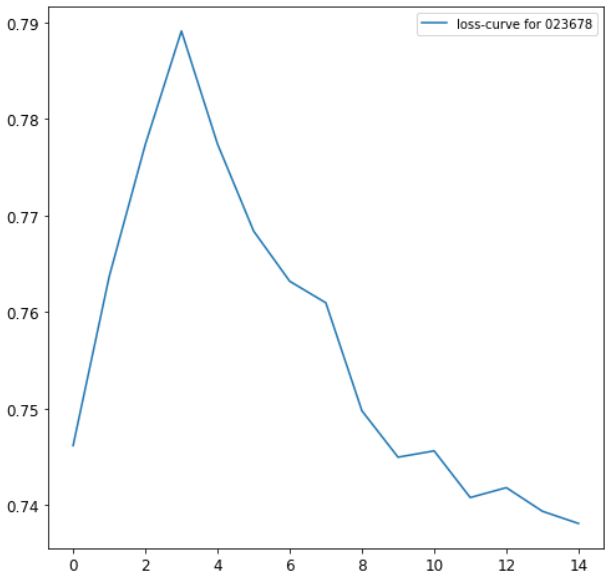
   4 Train accuracy: 0.99362 Test accuracy: 0.99114



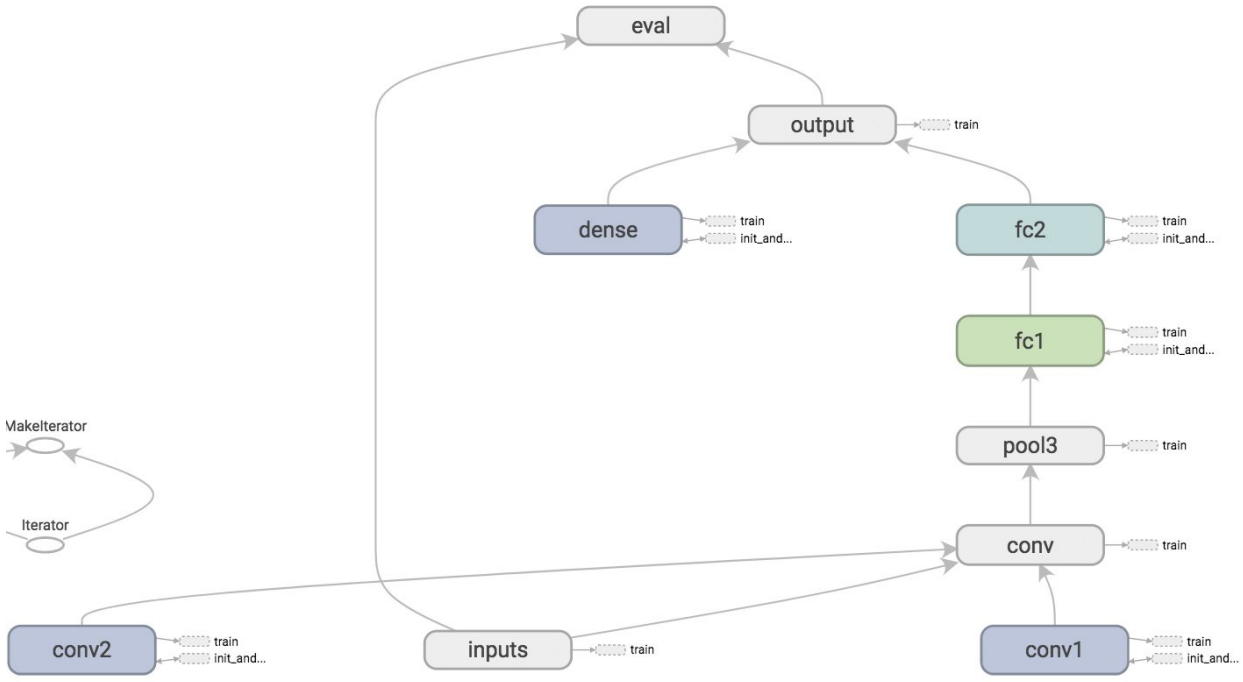
Freezing weights up to fc2:

Training with weights frozen up to fc2

0 Train accuracy: 0.702718 Test accuracy: 0.699933
1 Train accuracy: 0.744746 Test accuracy: 0.744901
2 Train accuracy: 0.770629 Test accuracy: 0.7668
3 Train accuracy: 0.78623 Test accuracy: 0.78218
4 Train accuracy: 0.789798 Test accuracy: 0.784855
5 Train accuracy: 0.791431 Test accuracy: 0.786025
6 Train accuracy: 0.793094 Test accuracy: 0.788198
7 Train accuracy: 0.79636 Test accuracy: 0.790538
8 Train accuracy: 0.795664 Test accuracy: 0.788365
9 Train accuracy: 0.796148 Test accuracy: 0.789034
10 Train accuracy: 0.797327 Test accuracy: 0.791876
11 Train accuracy: 0.798839 Test accuracy: 0.793213
12 Train accuracy: 0.800441 Test accuracy: 0.794216
13 Train accuracy: 0.800955 Test accuracy: 0.795386
14 Train accuracy: 0.800865 Test accuracy: 0.795386

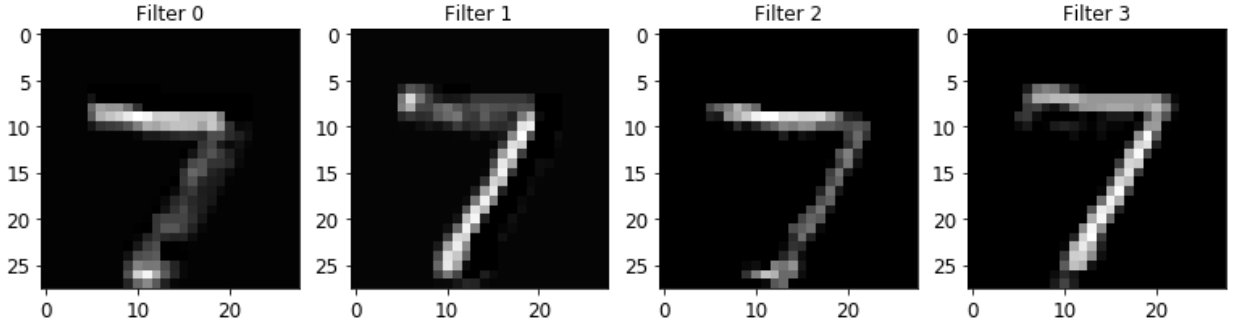


3. Final execution graph

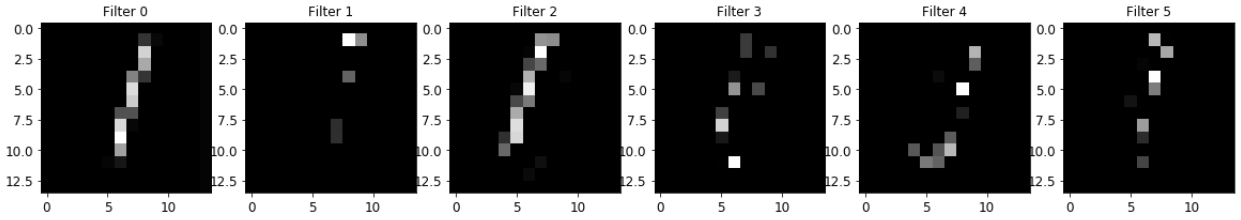


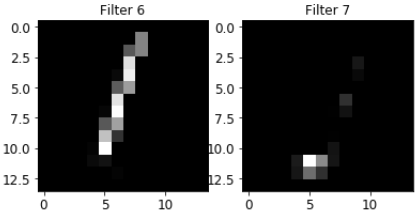
4. Visualized filter maps for bonus 2

CONV1:



CONV2





POOLING LAYER: