```
C:\Users\chris\anaconda3\python.exe "C:\Program Files\
JetBrains\PyCharm 2020.3.5\plugins\python\helpers\pydev
\pydevconsole.py" --mode=client --port=56465

import sys; print('Python %s on %s' % (sys.version, sys
.platform))
sys.path.extend(['C:\\Users\\chris\\PycharmProjects\\
NAI', 'C:/Users/chris/PycharmProjects/NAI'])

Python 3.8.8 (default, Feb 24 2021, 15:54:32) [MSC v.
1928 64 bit (AMD64)]
Type 'copyright', 'credits' or 'license' for more
information
IPython 7.21.0 -- An enhanced Interactive Python. Type
 '?' for help.
PyDev console: using IPython 7.21.0

Python 3.8.8 (default, Feb 24 2021, 15:54:32) [MSC v.
1928 64 bit (AMD64)] on win32
In[2]: runfile('C:/Users/chris/PycharmProjects/NAI/LAB5
/neural_network_fashion_MNIST.py', wdir='C:/Users/chris
/PycharmProjects/NAI/LAB5')
2021-12-16 19:46:03.476796: W tensorflow/
stream_executor/platform/default/dso_loader.cc:64]
Could not load dynamic library 'cudart64_110.dll';
dlerror: cudart64_110.dll not found
2021-12-16 19:46:03.478004: I tensorflow/
stream_executor/cuda/cudart_stub.cc:29] Ignore above
cudart dlerror if you do not have a GPU set up on your
machine.
Iteration 1, loss = 0.59179309
Iteration 2, loss = 0.42423563
Iteration 3, loss = 0.38798437
Iteration 4, loss = 0.36031181
Iteration 5, loss = 0.33946433
Iteration 6, loss = 0.32381763
Iteration 7, loss = 0.31136650
Iteration 8, loss = 0.30309162
Iteration 9, loss = 0.29335892
Iteration 10, loss = 0.28366177
Iteration 1, loss = 0.52510454
Iteration 2, loss = 0.39063711
```

```
Iteration 3, loss = 0.34111242
Iteration 4, loss = 0.31550344
Iteration 5, loss = 0.29478115
Iteration 6, loss = 0.28072502
Iteration 7, loss = 0.26910390
Iteration 8, loss = 0.25577273
Iteration 9, loss = 0.24265885
Iteration 10, loss = 0.23657947
Iteration 1, loss = 0.52386221
Iteration 2, loss = 0.37900822
Iteration 3, loss = 0.33481680
Iteration 4, loss = 0.30626815
Iteration 5, loss = 0.29148739
Iteration 6, loss = 0.27577240
Iteration 7, loss = 0.26266893
Iteration 8, loss = 0.25130148
Iteration 9, loss = 0.23855635
Iteration 10, loss = 0.22857392
-------------------SET SCORES-----------------
MLP1 SCORES: 1 hidden layer (100 neurons)
Training set score: 90.36%
Test set score: 87.75%
MLP2 SCORES: 1 hidden layer (500 neurons)
Training set score: 91.73%
Test set score: 88.06%
MLP3 SCORES: 1 hidden layer (700 neurons)
Training set score: 92.31%
Test set score: 88.87%
```