```
 1 /Users/benson/.local/share/virtualenvs/PYCHARM_Assign3-bo1URUBO/bin/Python /
   Applications/PyCharm.app/Contents/plugins/python/helpers/pydev/pydevconsole.py --
   mode=client --port=57723
 2
 3 import sys; print('Python %s on %s' % (sys.version, sys.platform))
 4 sys.path.extend(['/Users/benson/Desktop/compsci stuff/3p71/PYCHARM_Assign3'])
 5
 6 PyDev console: starting.
 7
 8 Python 3.8.9 (default, Aug  3 2021, 19:21:54)
 9 [Clang 13.0.0 (clang-1300.0.29.3)] on darwin
10 >>> runfile('/Users/benson/Desktop/compsci stuff/3p71/PYCHARM_Assign3/main.py',
   wdir='/Users/benson/Desktop/compsci stuff/3p71/PYCHARM_Assign3')
11 <----------------------->
12 Epoch 200 -> [MSE]:  0.2523337716455381
13 Epoch 400 -> [MSE]:  0.25037025749384706
14 Epoch 600 -> [MSE]:  0.2494436618474057
15 Epoch 800 -> [MSE]:  0.2484208069084823
16 Epoch 1000 -> [MSE]:  0.2473724322165239
17 Epoch 1200 -> [MSE]:  0.24626937446416752
18 Epoch 1400 -> [MSE]:  0.24416846525636873
19 Epoch 1600 -> [MSE]:  0.23408146906694802
20 Epoch 1800 -> [MSE]:  0.1422120177254296
21 Epoch 2000 -> [MSE]:  0.02043943899706993
22 Epoch 2200 -> [MSE]:  0.005389594606322017
23 Epoch 2400 -> [MSE]:  0.00285431057756159
24 Epoch 2600 -> [MSE]:  0.001883149394426242
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25 Epoch 2800 -> [MSE]:   0.0013840118078009996
26 Epoch 3000 -> [MSE]:   0.0010844023089289193
27 Epoch 3200 -> [MSE]:   0.0008863396719874945
28 Epoch 3400 -> [MSE]:   0.000746484963413635
29 Epoch 3600 -> [MSE]:   0.000642885962308802
30 Epoch 3800 -> [MSE]:   0.0005633000493579157
31 Epoch 4000 -> [MSE]:   0.0005003891494736986
32 Epoch 4200 -> [MSE]:   0.00044950098635249
33 Epoch 4400 -> [MSE]:   0.00040755036539279584
34 Epoch 4600 -> [MSE]:   0.0003724144654144658
35 Epoch 4800 -> [MSE]:   0.00034258697118233917
36 Epoch 5000 -> [MSE]:   0.0003169707617958442
37 Epoch 5200 -> [MSE]:   0.00029474863949609237
38 Epoch 5400 -> [MSE]:   0.0002752999499126801
39 Epoch 5600 -> [MSE]:   0.00025814520568272133
40 Epoch 5800 -> [MSE]:   0.00024290835573532898
41 Epoch 6000 -> [MSE]:   0.00022929049112251174
42 Epoch 6200 -> [MSE]:   0.00021705114997987507
43 Epoch 6400 -> [MSE]:   0.00020599478502082323
44 Epoch 6600 -> [MSE]:   0.00019596080866601166
45 Epoch 6800 -> [MSE]:   0.00018681616227238167
46 Epoch 7000 -> [MSE]:   0.00017844969548291327
47 Epoch 7200 -> [MSE]:   0.00017076786276279765
48 Epoch 7400 -> [MSE]:   0.00016369139179312202
49 Epoch 7600 -> [MSE]:   0.00015715267766106976
50 Epoch 7800 -> [MSE]:   0.00015109372543472055
51 Epoch 8000 -> [MSE]:   0.00014546451145526105
```

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52 Epoch 8200 -> [MSE]:  0.00014022166749541715
53 Epoch 8400 -> [MSE]:  0.00013532741615625028
54 Epoch 8600 -> [MSE]:  0.0001307487034345746
55 Epoch 8800 -> [MSE]:  0.0001264564872634135
56 Epoch 9000 -> [MSE]:  0.00012242515035737535
57 Epoch 9200 -> [MSE]:  0.00011863201281876098
58 Epoch 9400 -> [MSE]:  0.00011505692533414473
59 Epoch 9600 -> [MSE]:  0.00011168192787869048
60 Epoch 9800 -> [MSE]:  0.00010849096198025716
61 Epoch 10000 -> [MSE]:  0.00010546962701656297
62 [0, 0, 0, 0] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
   9799850671970369
63 [0, 0, 0, 1] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   0117351853847555615
64 [0, 0, 1, 0] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   007365531494044004
65 [0, 1, 0, 0] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   006676525661865786
66 [0, 1, 0, 1] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
   9946900247772185
67 [0, 1, 1, 0] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
   99837685291051
68 [1, 0, 0, 0] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   01162544040092383
69 [1, 0, 0, 1] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
   9860822701632332
70 [1, 0, 1, 0] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
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70 9941832060270939
71 [1, 0, 1, 1] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   011124871908563065
72 [1, 1, 0, 1] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   010179947738367218
73 [1, 1, 1, 1] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
   9986119972725549
74 <-- New data -->
75 [0, 0, 0, 0] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
   9799850671970369
76 [0, 1, 1, 1] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   21893907817325617
77 [1, 1, 0, 1] Expected -> 0 ; Prediction (Rounded) -> 0.0 ; Actual Output -> 0.
   010179947738367218
78 [0, 1, 0, 1] Expected -> 1 ; Prediction (Rounded) -> 1.0 ; Actual Output -> 0.
   9946900247772185
79
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