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Comp 425 F21 Final Project

Part 1: Solid results with the test/test loss/accuracy, with some runs approaching 99% accuracy within 10 epochs using Sigmoid activation.

Part 2: The results were not good, with accuracy hovering around < 5%.

Results seen below

```
device: cuda
Epoch: 0
        training loss/accuracy: 1.81/0.63
        testing loss/accuracy: 1.84/0.60
Epoch: 1
        training loss/accuracy: 1.69/0.75
        testing loss/accuracy: 1.79/0.64
Epoch: 2
        training loss/accuracy: 1.66/0.78
        testing loss/accuracy: 1.77/0.67
Epoch: 3
        training loss/accuracy: 1.64/0.80
        testing loss/accuracy: 1.74/0.69
Epoch: 4
        training loss/accuracy: 1.63/0.82
        testing loss/accuracy: 1.73/0.71
Epoch: 5
        training loss/accuracy: 1.62/0.83
        testing loss/accuracy: 1.73/0.72
Epoch: 6
        training loss/accuracy: 1.61/0.83
        testing loss/accuracy: 1.70/0.74
Epoch: 7
        training loss/accuracy: 1.60/0.84
        testing loss/accuracy: 1.70/0.74
Epoch: 8
        training loss/accuracy: 1.60/0.85
        testing loss/accuracy: 1.70/0.74
Epoch: 9
        training loss/accuracy: 1.59/0.85
        testing loss/accuracy: 1.70/0.75
```

```
device: cuda
epoch: 0
        training loss/accuracy: 4.80/0.01
        testing loss/accuracy: 4.79/0.01
epoch: 1
        training loss/accuracy: 4.79/0.01
        testing loss/accuracy: 4.79/0.01
epoch: 2
        training loss/accuracy: 4.79/0.01
        testing loss/accuracy: 4.78/0.01
epoch: 3
        training loss/accuracy: 4.79/0.01
        testing loss/accuracy: 4.79/0.01
epoch: 4
        training loss/accuracy: 6.91/0.01
        testing loss/accuracy: 6.75/0.01
epoch: 5
        training loss/accuracy: 5.77/0.01
        testing loss/accuracy: 4.81/0.01
epoch: 6
        training loss/accuracy: 4.84/0.01
        testing loss/accuracy: 4.80/0.01
epoch: 7
        training loss/accuracy: 4.83/0.01
        testing loss/accuracy: 4.78/0.01
epoch: 8
        training loss/accuracy: 4.78/0.02
        testing loss/accuracy: 4.77/0.01
epoch: 9
        training loss/accuracy: 4.74/0.02
        testing loss/accuracy: 4.73/0.02
epoch: 10
        training loss/accuracy: 4.75/0.02
        testing loss/accuracy: 4.72/0.02
epoch: 11
        training loss/accuracy: 4.70/0.02
        testing loss/accuracy: 4.69/0.02
epoch: 12
        training loss/accuracy: 4.70/0.02
        testing loss/accuracy: 4.69/0.02
epoch: 13
        training loss/accuracy: 5.37/0.02
        testing loss/accuracy: 4.74/0.02
epoch: 14
        training loss/accuracy: 4.76/0.02
        testing loss/accuracy: 4.86/0.02
epoch: 15
        training loss/accuracy: 4.75/0.02
        testing loss/accuracy: 4.69/0.02
epoch: 16
        training loss/accuracy: 4.68/0.02
        testing loss/accuracy: 4.68/0.02
epoch: 17
        training loss/accuracy: 4.72/0.02
        testing loss/accuracy: 4.72/0.02
epoch: 18
        training loss/accuracy: 4.64/0.03
        testing loss/accuracy: 4.68/0.02
epoch: 19
        training loss/accuracy: 4.66/0.02
        testing loss/accuracy: 4.63/0.03
```