



## Epochs

```
print('Test Accuracy: {}'.format(test_accuracy))
```

Running the code will output the following:

```
Epoch: 0 - Cost: 11.0 Valid Accuracy: 0.204
Epoch: 1 - Cost: 9.95 Valid Accuracy: 0.229
Epoch: 2 - Cost: 9.18 Valid Accuracy: 0.246
Epoch: 3 - Cost: 8.59 Valid Accuracy: 0.264
Epoch: 4 - Cost: 8.13 Valid Accuracy: 0.283
Epoch: 5 - Cost: 7.77 Valid Accuracy: 0.301
Epoch: 6 - Cost: 7.47 Valid Accuracy: 0.316
Epoch: 7 - Cost: 7.2 Valid Accuracy: 0.328
Epoch: 8 - Cost: 6.96 Valid Accuracy: 0.342
Epoch: 9 - Cost: 6.73 Valid Accuracy: 0.36
Test Accuracy: 0.3801000118255615
```

Each epoch attempts to move to a lower cost, leading to better accuracy.

This model continues to improve accuracy up to Epoch 9. Let's increase the number of epochs to 100.

```
...
Epoch: 79 - Cost: 0.111 Valid Accuracy: 0.86
Epoch: 80 - Cost: 0.11 Valid Accuracy: 0.869
Epoch: 81 - Cost: 0.109 Valid Accuracy: 0.869
....
Epoch: 85 - Cost: 0.107 Valid Accuracy: 0.869
Epoch: 86 - Cost: 0.107 Valid Accuracy: 0.869
Epoch: 87 - Cost: 0.106 Valid Accuracy: 0.869
Epoch: 88 - Cost: 0.106 Valid Accuracy: 0.869
Epoch: 89 - Cost: 0.105 Valid Accuracy: 0.869
Epoch: 90 - Cost: 0.105 Valid Accuracy: 0.869
Epoch: 91 - Cost: 0.104 Valid Accuracy: 0.869
Epoch: 92 - Cost: 0.103 Valid Accuracy: 0.869
Epoch: 93 - Cost: 0.103 Valid Accuracy: 0.869
Epoch: 94 - Cost: 0.102 Valid Accuracy: 0.869
Epoch: 95 - Cost: 0.102 Valid Accuracy: 0.869
Epoch: 96 - Cost: 0.101 Valid Accuracy: 0.869
Epoch: 97 - Cost: 0.101 Valid Accuracy: 0.869
Epoch: 98 - Cost: 0.1 Valid Accuracy: 0.869
Epoch: 99 - Cost: 0.1 Valid Accuracy: 0.869
Test Accuracy: 0.8696000006198883
```