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## Documentation of my Neural Network Project

# Digit Recognizer

Learn computer vision fundamentals with the famous MNIST data

**Skills that I learnt:**

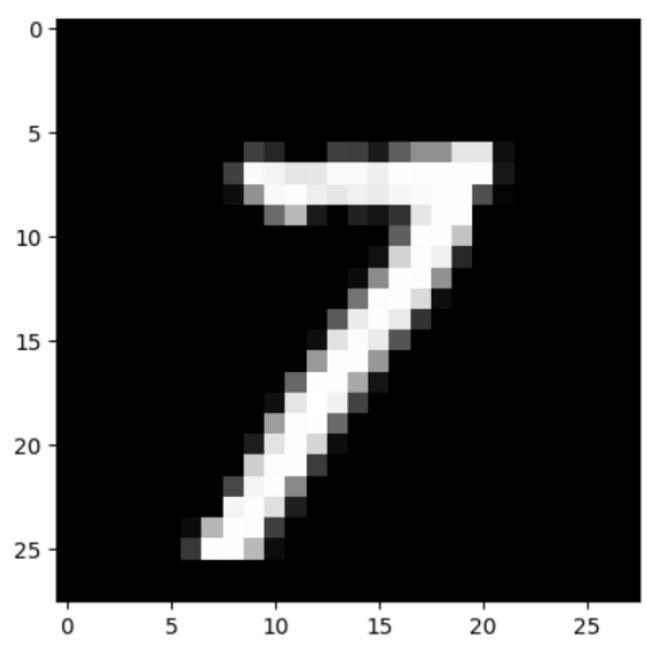
- The math equations (weights, biases, dot products, transposing) behind a simple neural network and I was able to break down the whole architecture into 3 simple phases: forward propagation, backward propagation and updating of parameters.
- I also learnt about activation functions such as Softmax and the purpose of Rectified Linear Unit (ReLU) to process the information stored inside matrices.
- Was a fun computer vision and neural network programming project that I embarked on, and after doing a preliminary training with some debugging, the model had an 86.6% accuracy approximately.

**Libraries used:**

- NumPy
- Pandas
- Matplotlib

```
In [23]: test_prediction(0, W1, b1, W2, b2)

Prediction:  [7]
Label:  7
```




```
Iteration:  490
[7 4 0 ... 6 5 2] [7 4 0 ... 6 5 2]
Accuracy:  0.8658292682926829
```