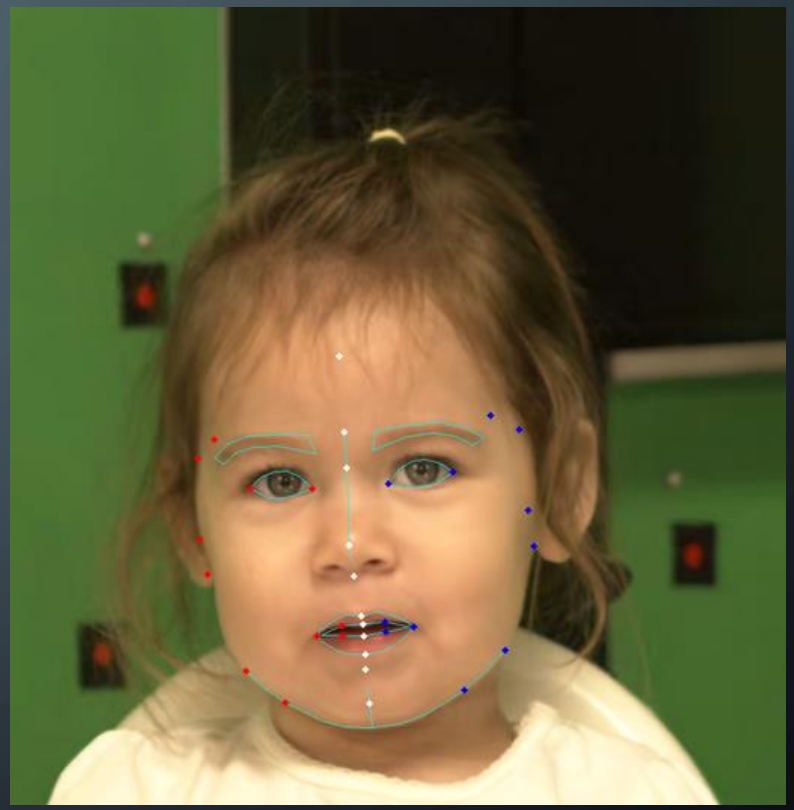
COMPUTER VISION

SMAAT

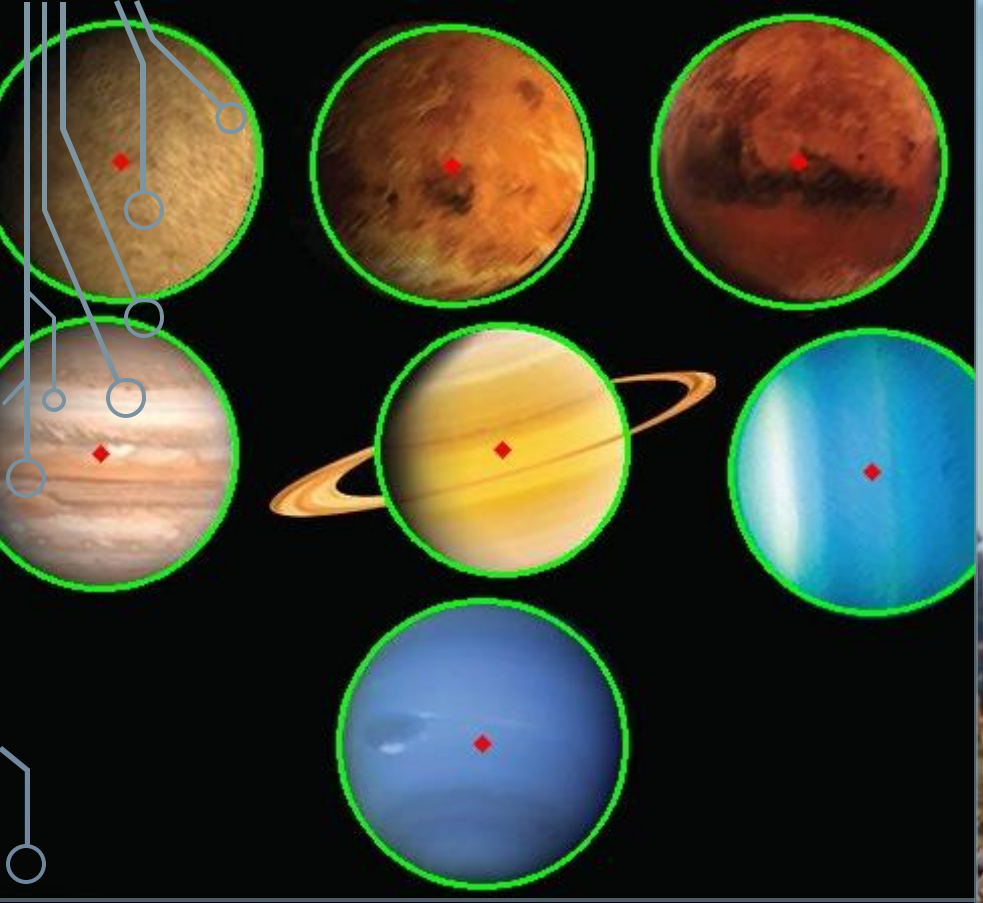
Speech Movement and Acoustic Analysis Tracker

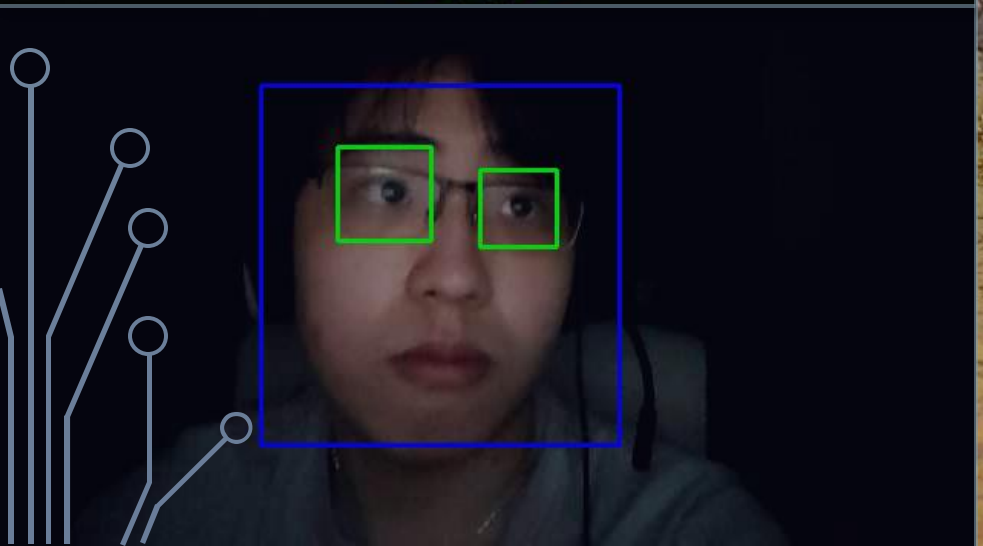


Speech Movement and Acoustic Analysis Tracking. Adapted from Speech Movement and Acoustic Analysis Tracking (SMAAT), 2020 (https://www.smaat.org/).

HANDWRITTEN DIGITS RECOGNITION

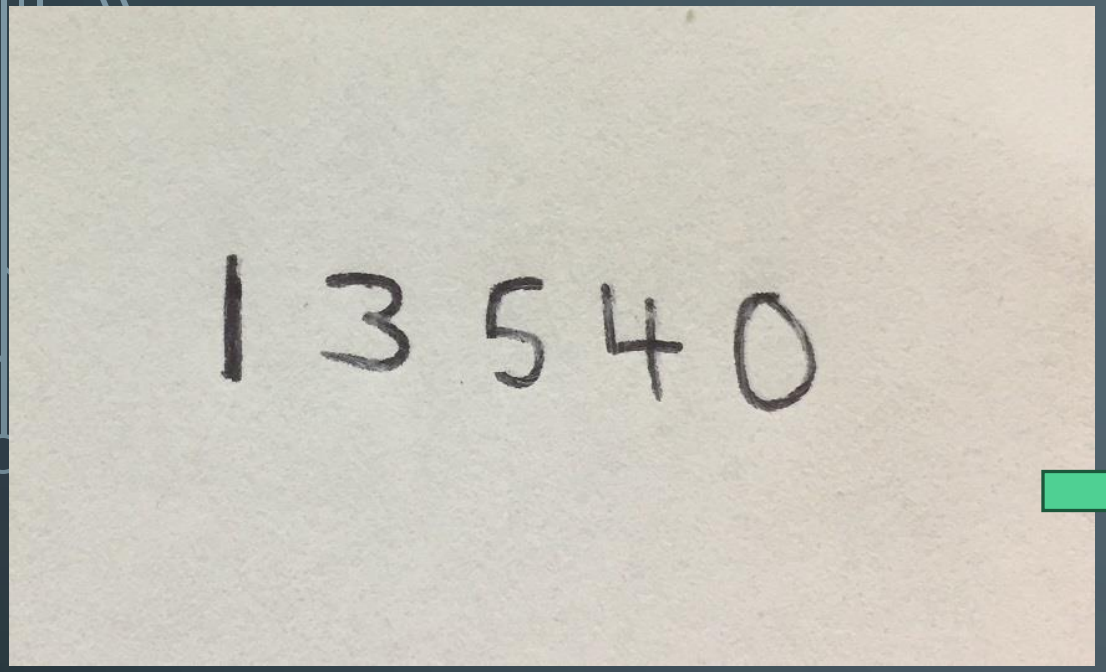
IMPLEMENTING A NEURAL NETWORK FROM SCRATCH IN C++ WITH THE MNIST DATASET



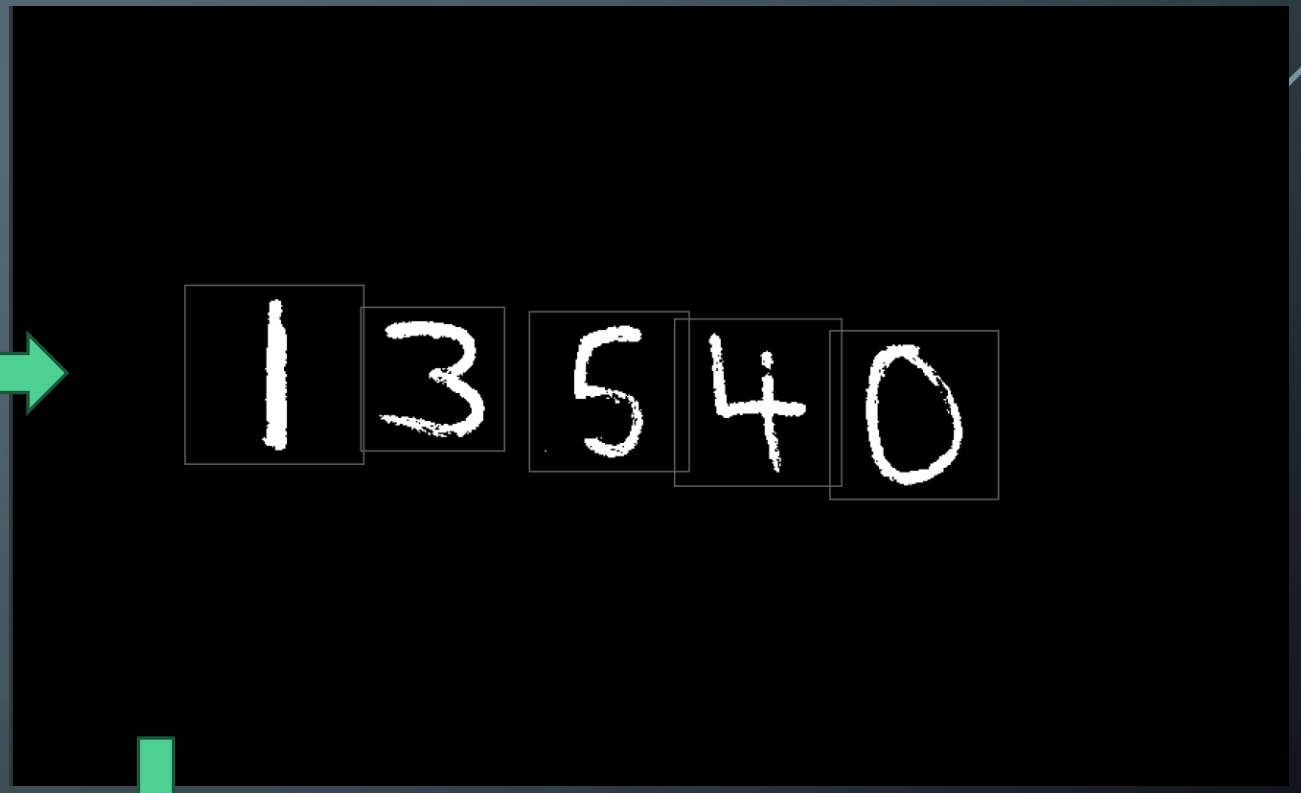


OPENCV LIBRARY

PROCESS

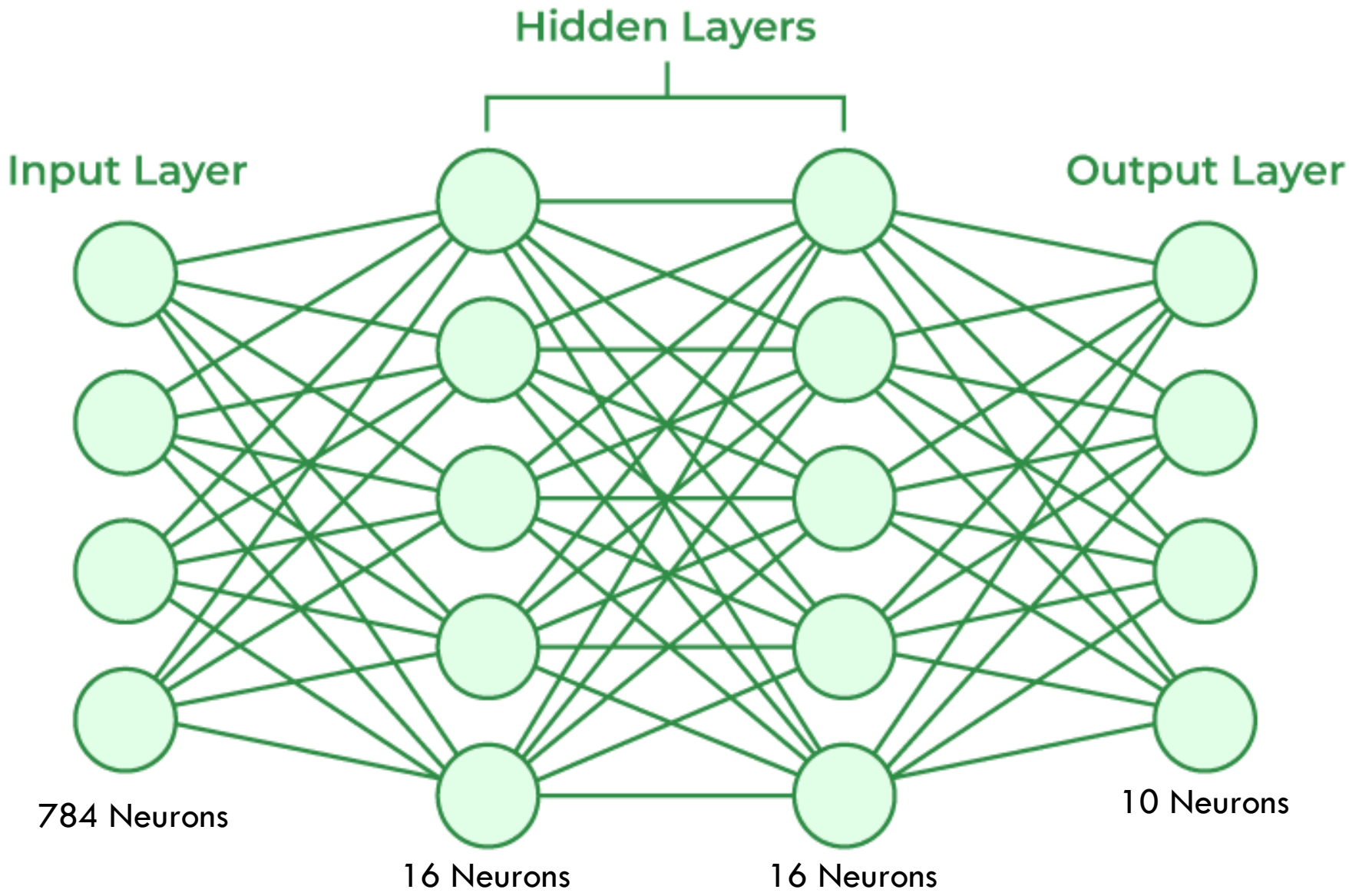


1. Transform coloured image into greyscale



2. Locate and box in numbers

3. Cut and blur to 28x28 pixels



Artificial Neural Networks and its Applications. Adapted from Harkiran, 2023, GeeksforGeeks (https://www.geeksforgeeks.org/artificial-neural-networks-and-its-applications/).

RESULTS

- Correct: 17608, out of 20000
- Correct: 17652, out of 20000
- Correct: 17669, out of 20000

- Total of 52929 out of 60000 correct predictions
- Average Accuracy: 88.215 %

TIMELINE


Add more method of accuracy evaluation
Tuning of Neural Network
Convert Code into object-oriented design
Deployment of application

THANK YOU

https://github.com/joardan/NPSC

Speech Movement and Acoustic Analysis Tracking (SMAAT). (2020). Speech Movement and Acoustic Analysis Tracking (SMAAT). SMAAT. https://www.smaat.org/

Harkiran. (2023, June 2). Artificial neural networks and its applications. GeeksforGeeks. https://www.geeksforgeeks.org/artificial-neural-networks-and-its-applications/