Weekly Progress Update

Weekly Presentation

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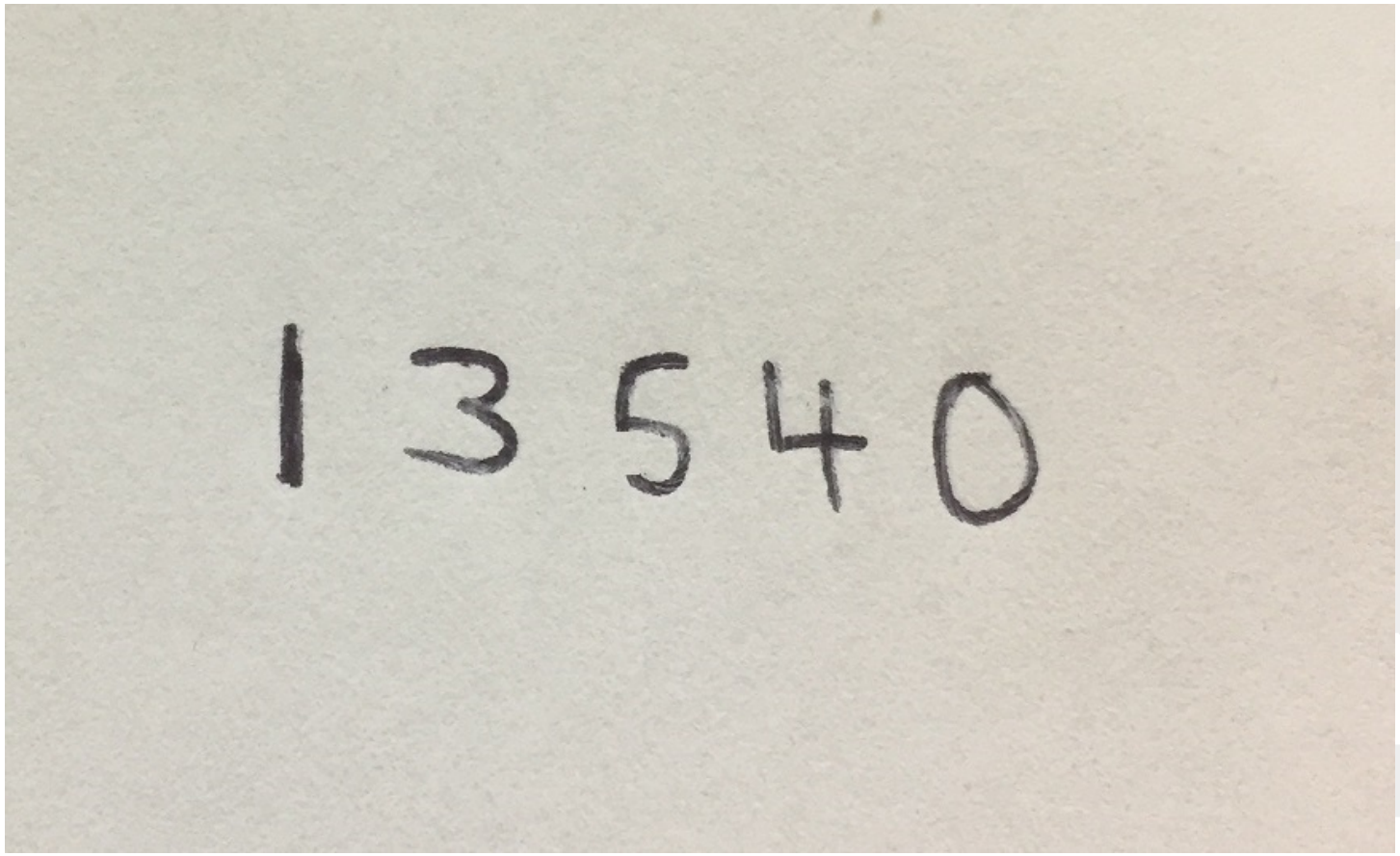
What I Did This Week:

- Issues: No major issues
- Action 1: Set GitHub https://github.com/joardan/NPSC
- Action 2: Learned basics of Eigen
- Action 3: Created a working prototype code to isolate a number in C++
- Action 4: Improved code to isolate multiple numbers and convert into 28 x 28 to match the MNIST dataset

Work progress



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Work progress

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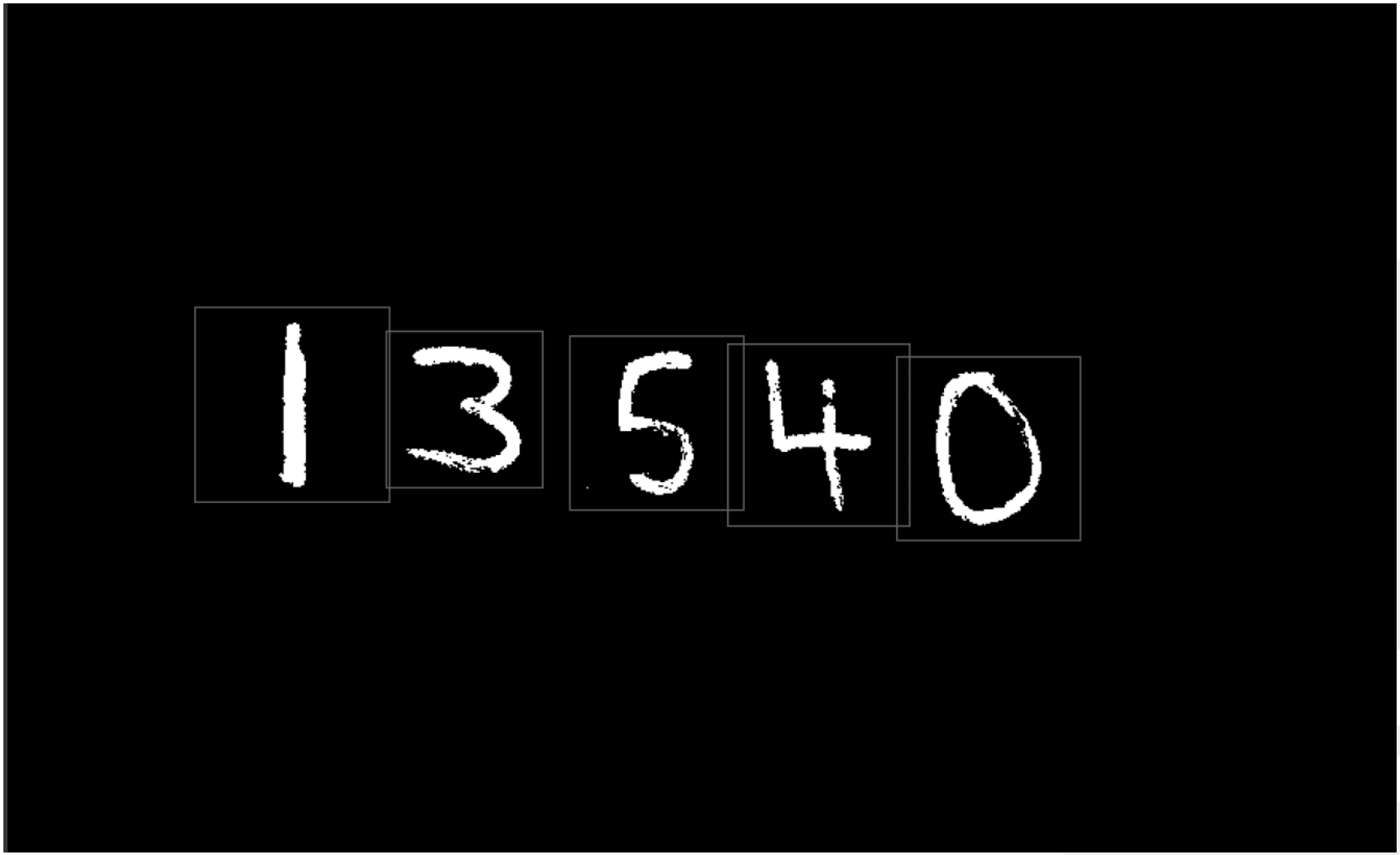

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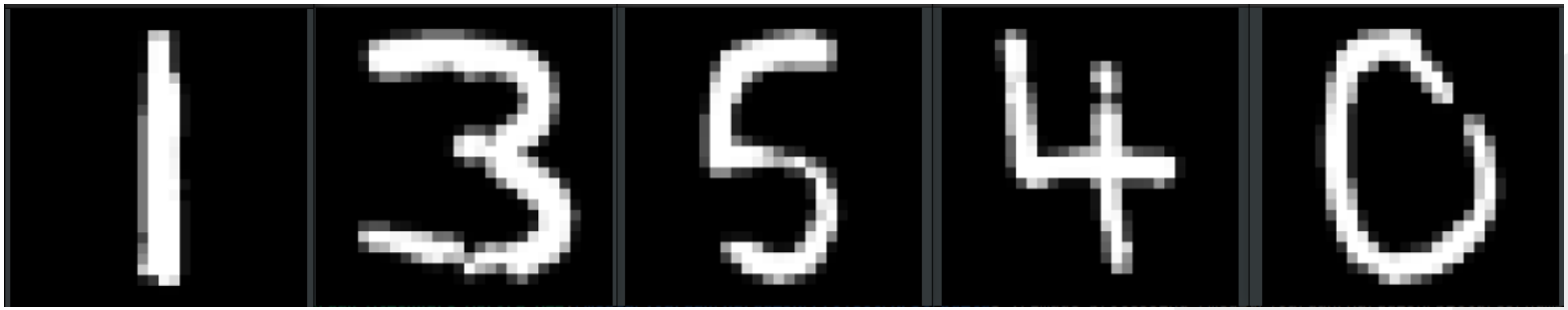
Work progress



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What I Understand Thus Far

- I understand more about OpenCV, CMake, C++, project management and directory structure and RPATH when using libraries
- Main idea used for the program:
  - Read Image in grayscale
  - Use threshold to denoise
  - Find contour to find and box the number
  - Crop it using the box
  - Dilate and Gaussian blur
  - Resize the image to 28 x 28 to look like MNIST dataset

To Do by Next Week

- Improve image encoding code, convert into OOP structure
- create basic neural network
- learn more Eigen

Longer Term Goals

- Finish the main part of the project by end of May
- Improve customisability of the neural network
- Learn more OpenCV, maybe extend to handwritten text

Thank you!

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