Binar.ai User Manual

# Overview

Binar.ai is an image recognition algorithm that can detect fixed length handwritten binary numbers and convert them to decimals. The notebooks in the ‘*source\_code*’ directory contains the model and variations of the model that has been created throughout the experimentation stages. The notebook also contains in-depth explanation on the model, hopefully providing the user an understanding of its design choices.

# Files

Under the ‘*source\_code’* directory there are a few files you will see:

1. *‘custom\_tests’* directory contains two images that were handwritten by the team
2. *‘images’* directory contains the images embedded into the Jupyter Notebooks
3. *‘models’* directory contains the saved models
4. ***‘Binarai.ipynb’* is the main notebook that you should take note of, this contains the model**
5. *‘Convolution\_Neural\_Network.ipynb’* is a notebook meant for understanding how CNNs work
6. *‘MNIST\_Database\_Exploration.ipynb’* is a notebook for MNIST visualization

# Setup

There are no requirements for any setup. The entirety of the project is contained within ‘*Binarai.ipynb’.* Running all cells should suffice, although not recommended as models take a long time to train. As the project is not an executable, data processing, steps for training/testing are not required. Users only need to walk through the notebook and should be able to understand the project and the model.