

Assignment 6

Deadline : 26th March, 2024

March 19, 2024

1 Preliminaries

This time we'll be using some Machine Learning ! in particular we'll be using CNNs (Convolutional Neural Networks) for image classification.

Some Theory :

- Upto and including video 8
- Entire Playlist
- Entire Lecture

2 Task I

Go through this Kaggle competition and utilize the MNIST dataset for building a digit recognition tool. Although code for this would be freely available you are strongly encouraged to write your own code as you would be tested on your understanding of what you have submitted.

3 Task II

Now let's experiment with YOLO ! Your task is to

- create a custom dataset of 3 classes with 3 images each and train the model over that
- find and use an existing dataset online and train on it

For this refer to https://docs.ultralytics.com/yolov5/tutorials/train_custom_data/

4 Submission Guidelines

Utilise Python Notebooks (.ipynb) for the assignment, you can use Jupyter Notebook, VS Code or Google Colab (recommended for training) and submit the .ipynb file

ALL THE BEST!!!