

Assignment 1

Dataset Overview:

The dataset is provided in two files: train.csv and test.csv, representing the pre-partitioned training and testing sets, respectively.


- **train.csv:** Contains 60,000 instances.
- **test.csv:** Contains 10,000 instances.

Each line in the files corresponds to a single labeled data instance.

Data Instance Format:

For each line in the files, there are 785 elements separated by comma.

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```
label,feature1,feature2,feature3,...,feature784
```

- **Label:** The first element represents the label, with possible values ranging from 0 to 9.
- **Features:** The remaining 784 elements are the features of the data instance, all represented as integers.

Task To Be Done:

You are required to develop a Multilayer Perceptron (MLP) model using the training set and evaluate its performance on the testing set. Your evaluation should include performance metrics and any other relevant analysis (such as hyperparameter).

Deliverables:

1. **Report:** A written report detailing your approach, model development, and evaluation results. A template for the report is provided.
2. **GitHub Repository:** Create a public GitHub repository and upload your code. Include the link to your repository in the report.