

Implement everything from scratch and use your own code for evaluation metrics.

1. You are given the MNIST dataset consisting of two files train.csv and test.csv. The files contain the intensity values of each pixel for each image in an array format (the array size=784). Implement a logistic regression classifier to predict the labels for all the samples in test.csv. Compute all the evaluation metrics (Accuracy, Precision, Recall, and F1 Score). Write a function to convert an array into an image. Write a separate prediction function that takes an array of size 784 (pixel intensities) and a model as inputs, and returns an image and its predicted label.
2. Take the dataset provided in Assignment 9 (bank-full.csv). Take the same splits of train and test that you did in Assignment 9. Implement a Naive Bayes' classifier and compute all the evaluation metrics on the test data.