**Summary about MNIST dataset**

In this project, I was working on the MNIST dataset which was about the handwritten digits from 0 to 9. To this project, the task is to classify a given image of a handwritten digit into one of the 10 classes. The dataset contains two files: one is MNIST\_train.csv and another one is MNIST\_test.csv. The MNIST\_train consists 60,000 small square 28\*28-pixel grayscale images of single digits. The MNIST\_test consists of 10,000 small square 28\*28 pixel grayscale images of single digits. Initially, data exploration is done on this dataset such as to see the structure of the data, checking the missing values and drawing the histogram to see the count of each digit class in the data. To classify the digit, first, I used the gaussian bayes algorithm on the given data and I got 75% accuracy on the validation data. Thereafter, I tried to change the parameter like epsilon and my accuracy got increased up to 81%. I did not normalise the data, but the accuracy was pretty good. Also, on the unseen dataset, the gaussian bayes model gave 75% accuracy. To improve the accuracy, we can normalize the data and fit the model.

In general, MNIST dataset is used for several real-world use cases. I want to use this dataset to create an automated system to recognise and verify the name and the account number on the paper slip. Then after, money can be withdrawn and deposit in the account holder.