**Handwritten Digit Recognition**

**Group members:-**

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**Problem Statement:**

We are going to develop the capstone project to create a classification model that will be able to recognize and determine the handwritten digits from its image by using the concepts of Machine learning and Neural Network. The project goal is to create a model which can recognize the digits, it can be extended to letters and an individual’s handwriting. The major goal of the proposed system is understanding Neural Network and applying it to the handwritten digits recognition system.

Digit recognition has important practical applications such as reading zip codes for

automated mail sorting, online handwriting recognition on computer tablets and processing bank check amounts, numeric entries in forms filled up by hand.

The handwritten digits are not always of the same size, thickness, or orientation and position relative to the margins. Our goal is to implement a pattern classification method to recognize the handwritten digits provided in the MINIST data set of images of handwritten digits.

**Dataset:**

MNIST database of handwritten digits is used as dataset. It consists of a training set of 60,000 examples, and a test set of 10,000 examples. The digits have been size-normalized and centered in a fixed-size image of 28\*28 pixels (784 pixels)1.