ARTIFICIAL INTELLIGENCE
HAND WRITTEN DIGIT RECOGNITION
PROJECT PROPOSAL

TEAM MEMBERS

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Hand Written Digit Recognition

In this project we will identity handwritten digits from a set of documents. The goal of the project is to take an image of a handwritten single digit and determine what the digit is. This project uses deep learning technique that recognizes objects in image data. Recognition of handwritten digits is a big challenge in old manuscripts and documents. This project is taken from Kaggle competitions.

The testing data will be taken from Modified National Institute of Standards and Technology (MNIST) which contains training set of 60,000 examples and a test set of 10,000 examples. This data is provided by Kaggle within three data files (.csv) namely train.csv, test.csv and sample_submission.csv. These data files contain grey-scale images of hand-drawn digits starting from zero to nine. Each image contains 784 pixels in total. It is segmented into 28*28 pixels height by width representing the pixels brightness or darkness with a number rating. The rating given to the pixel is between 0 and 255, inclusive. The train.csv contains 785 columns. The first one is the ‘label’ and is the digit drawn by the user. The rest of the column contains the pixel value of the surrounding pixels.

In this project 1. We will analyze the test data which requires implementation of learning techniques 2. Develop an algorithm 3. To train and predict data which requires pattern recognition methods.