

MIST HANDWRITTEN DIGIT CLASSIFICATION

High Level Design

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OCTOMER 16 , 2023

LETSGROWMORE

1.INTRODUCTION

Why this High Level Design Document?

High-level design (HLD) explains the architecture that would be used to develop a system. The architecture diagram provides an overview of an entire system, identifying the main components that would be developed for the product and their interfaces.

Scope of High Level Design Document

The High-Level Design documentation presents the structure of the system as the application/database architecture, application flow, and technology architecture. High-Level Design documentation may use some non-technical terms, unlike low-level design which should be strictly technical jargon.

2. PROJECT DESCRIPTION

PROBLEM STATEMENT

Develop a system that classifies the input image into digits.

PROPOSED SOLUTION

Machine learning is a field in computer science aiming to imitate the human learning process. Deep Learning is a branch of machine learning where deep learning system imitates the biological neuron. Here we will develop Deep Learning models to classify the handwritten digit image.

DATA INFORMATION

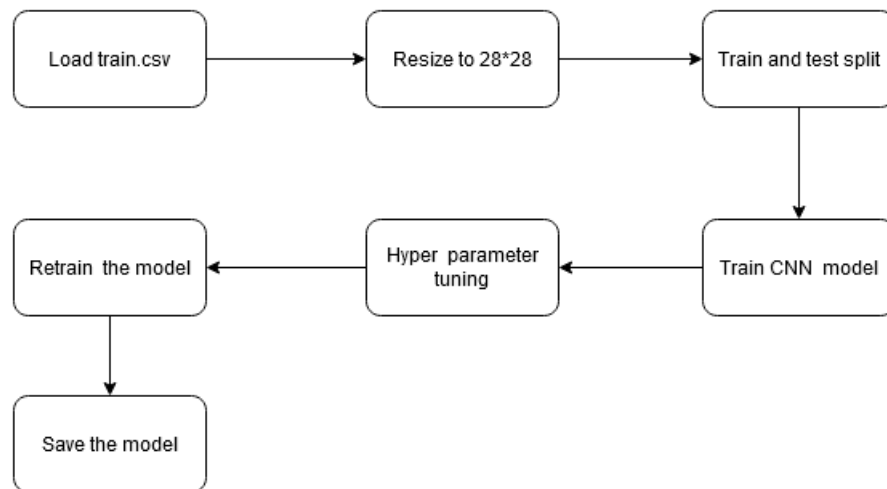
The dataset was taken from Kaggle. This dataset is in CSV format. Each row contains 784 values, 1 for label and 784 values for image. There are 10 labels starting from 0 to 9.

TOOLS USED

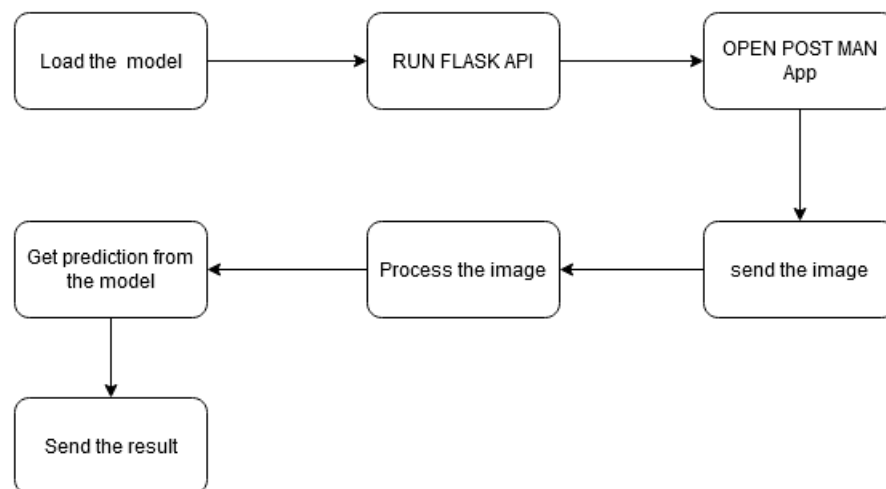
Python programming language and frameworks such as Numpy, OpenCV is used for image processing and Tensorflow library is used for model building. Flask is used to deploy trained model.

3. DESIGN DETAILS

Process flow



Deployment process



CONCLUSION

The model is deployed using Flask and using postman application you can send request to API and result will be in the form JSON format.

