Project Design Phase-I
Solution Architecture

Date	17 September 2022
Team ID	PNT2022TMID24089
Project Name	A Novel Method For HandWritten Digit Recognition System
Maximum Marks	4 Marks

PROJECT DESCRIPTION:

Handwriting detection is one of the most fascinating scientific topics currently under progress

since everyone has a unique writing style. It is the ability of the computer to automatically

recognise and comprehend handwritten numbers or characters. Everything is becoming

digitalized to minimise human effort as a result of scientific and technological advancements.

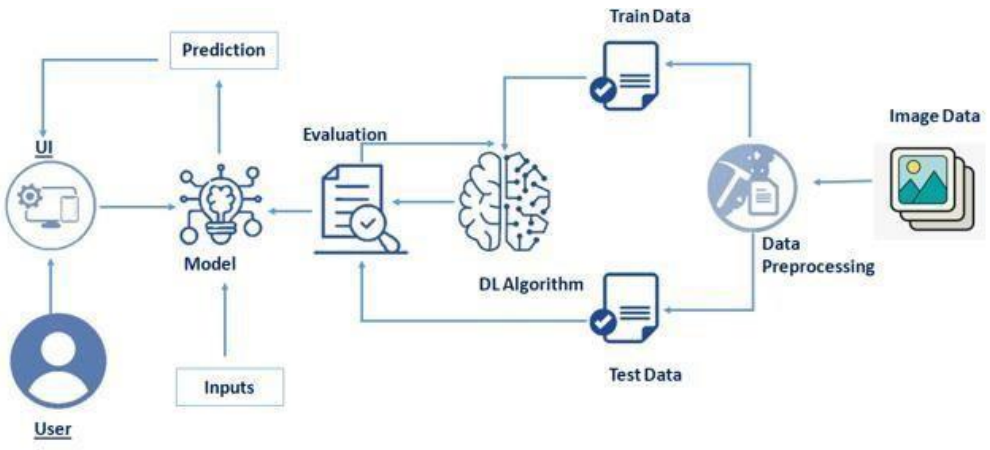
In many real-time applications, handwritten digit identification is therefore necessary. This

recognition algorithm frequently makes use of the MNIST data collection, which comprises

70000 handwritten digits. Artificial neural networks are used to train these pictures and

develop a deep learning model. The user can submit a picture of a handwritten digit using a web application that has been created.

TECHNICAL ARCHITECTURE:



ALGORITHM:

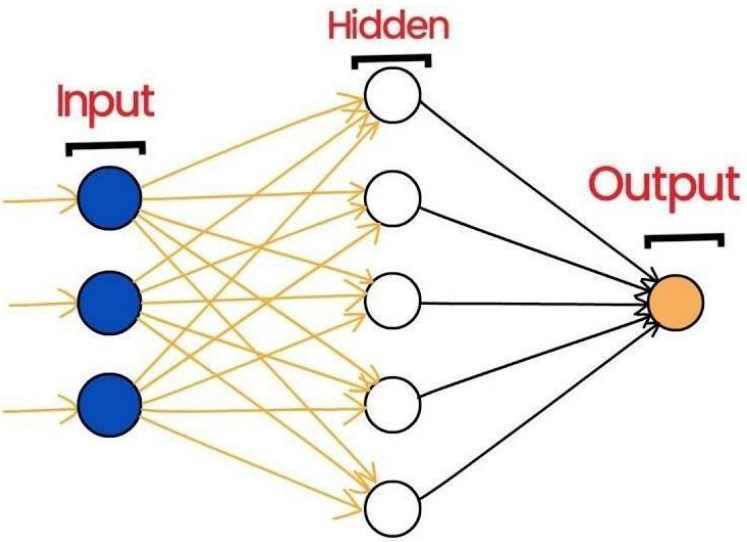
Forward Propagation Architecture:

It is a brief description of how the CNN module will extract features and categorize the image

based on them. The network's input layer, hidden layers, and output layer are depicted in the

design. The feature extraction phase of the network involves multiple layers, including

convolution and resampling.



RESULT:

There is always space for improvement in our methods because machine learning is a

discipline that is always changing. There will always be a fresh idea that better deals with a

certain problem. The application was evaluated using three models—Multi-Layer Perceptron

(MLP), Convolution Neural Network, and (CNN). The classifier accuracy for each model

varies, demonstrating which is more accurate.