Project Design Phase-I
Proposed Solution Template

Date	16 October 2022
Team ID	PNT2022TMID22361
Project Name	Project - A Novel Method for Handwritten Digit Recognition System.
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	**Problem Statement (Problem to be solved)**	**Statement**-The handwritten digit recognition is the capability of computer applications to recognize the human handwritten digits. **Description-** It is a hard task for the machine because handwritten digits are not perfect and can be made with many different shapes and sizes.
2.	**Idea / Solution description**	We propose a novel method to compute the learning rate for training deep neural networks with stochastic gradient descent.
3.	**Novelty / Uniqueness**	The novelty of this project lies in the thorough investigation of all the parameters of CNN architecture to deliver the best recognition accuracy. In case of simple neural network, the accuracy will be less, while on the CNN the accuracy will be more.
4.	**Social Impact / Customer Satisfaction**	It is used in the detection of vehicle number, banks for reading cheques, post offices for arranging letter, and many other tasks. It is time consuming and fastest method.
5.	**Business Model (Revenue Model)**	• This system can be integrated with traffic surveillance cameras to recognize the vehicle's number plates for effective traffic management • Can be integrated with Postal system to identify and recognize the pin-code details easily
6.	**Scalability of the Solution**	This project will help us to detect digits more precisely. Also we can develop this model to recognize alphabets.