Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID15430
Project Name	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)	1. The Handwritten digits are not always of the same size, width, orientation and justified to margins as they differ from writing of person to person. 2. The similarity between digits such as 1 and 7, 5 and 6, 3 and 8, 2 and 7 etc. So, classifying between these numbers is also a major problem for computers. 3. The uniqueness and variety in the handwriting of different individuals also influence the formation and appearance of the digits.
2.	Idea / Solution description	The general problem we predicted we would face in this digit classification problem was the similarity between the digits like 1 and 7, 5 and 6, 3 and 8, 8 and 8 etc. Also people write the same digits in many different ways. Finally the uniqueness and variety in the handwriting of different individuals also influences the formation and appearance of the digits.
3.	Novelty / Uniqueness	This project is based on a deep neural network where users are going to get an interface for recognition of their digit images. On the top of this model, this project can be extended to append various functionalities which can be used to filter the desired results based on digits recognized by this model.
4.	Social Impact / Customer Satisfaction	For instance, if any academic institute wants to disburse scholarship to their talented students who lacks money can use this model to process forms submitted by students and filters the needy students.

5.	Business Model (Revenue Model)	A CNN model is consists of convolutional layers and pooling layers. It works better for data that are represented as grid structures, this is the reason why CNN works well for image classification problems
6.	Scalability of the Solution	The solutions are very scalable .If users chooses first option, he will be guided to a drawer interface.If users chooses second option, he will be asked to insert image file from their local directory.So by giving recognized digits as a results against inputs made by users to its users, this project fulfils all its objective