Project Design Phase-I
Proposed Solution Template

Date	3 November 2022
Team ID	PNT2022TMID20912
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)	Developing a novel handwritten recognition system using ML The handwritten digit recognition system is a way to tackle the problem which uses the image of a digit and recognizes the digit present in the image.
2.	Idea / Solution description	Convolutional Neural Networks (CNN) has become one of the most appealing approaches and has been an ultimate factor in a variety of recent success and challenging machine learning applications. In our model we use AlexNet , which is one of the CNN architectures . AlexNet allows for multi-GPU training by putting half of the model's neurons on one GPU and the other half on another GPU. Not only does this mean that a bigger model can be trained, but it also cuts down on the training time. It also reduces the overfitting problem by Data Augmentation and Dropout.
3.	Novelty / Uniqueness	Handwritten Digit Recognition is the capability of a computer to fete the mortal handwritten integers from different sources like images, papers,touch defenses, etc. And classify them into 10 predefined classes(0-9).This is the existing method along with this we add some features to make our project unique among them.
4.	Social Impact / Customer Satisfaction	This application reduces the manual tasks that need to be performed. This improves productivity in the workplace.
5.	Business Model (Revenue Model)	It is used in the detection of vehicle numbers, banks for reading cheques, post offices for arranging letters, and many other tasks.
6.	Scalability of the Solution	The application can easily be scaled to accept multiple inputs and process them parallelly to further increase efficiency.