

Project Design Phase-I
Proposed Solution Template

Date	29 September 2022
Team ID	PNT2022TMID02181
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)	Requirement of a novel method to recognize handwritten digits using Conventional Neural Networks (CNN) using the MNIST dataset with higher accuracy and reliability.
2.	Idea / Solution description	The solution is to first normalize the image and pass the normalized image to the ResNet (a variation of CNN) and extract digit specific features. We then pass on these features to a fully connected layer to get the class prediction.
3.	Novelty / Uniqueness	Based on an examination of the thickness and form of the numerical picture, it can accurately and efficiently identify the digits.
4.	Social Impact / Customer Satisfaction	It can be used in traffic signals to find the vehicle number registration in case of violation of traffic rules.
5.	Business Model (Revenue Model)	The accuracy and faster rate at which the digits are recognized helps in reducing human labour cost .
6.	Scalability of the Solution	Ability to recognize continuous numbers in banking and other sectors where the accuracy of numbers is highly in demand. Ability to recognize real time characters and words recognition.