Project Design Phase-I
Proposed Solution Template

Date	22 September 2022
Team ID	PNT2022TMID37900
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
•	Problem Statement (Problem to be solved)	To detect custom handwritten digits while making image processing and recognising more accurate by computing devices and automated machines.
•	Idea / Solution description	Convolutional Neural Networks can almost mimic the human brain and are a key ingredient in image processing field. The MNIST dataset will be used for dataset.
•	Novelty / Uniqueness	To facilitate input in various forms, the digits recognised through scanning, using touch screens also.
•	Social Impact / Customer Satisfaction	Customer find it hassle-free for not being approached for data clarification by the organisation or subjected to wrong information.
•	Business Model (Revenue Model)	Faster the data are recognised, more the time saved for analysis and furthur processing of the data, that has huge positive change in an organisation.
•	Scalability of the Solution	Neural Network's three dimensions are depth, width and resolution and depth(d)= a^Φ, width(w)= b^Φ, resolution(r)= c^Φ, s.t. a.b^2.c^2≈2, a>=1, b>=1, c>=1, where Φ is compound coefficient. Graph illustrating the transition of training loss of CNN with increasing number of epochs contains curve going in downward direction and the transition of training accuracy of CNN with increasing number of epochs shows curve going in upward direction.