

**Project Design Phase-I**  
**Proposed Solution**

Date	02 October 2022
Team ID	PNT2022TMID14907
Project Name	Project - A Novel Method for Handwritten Digit Recognition System
Maximum Marks	2 Marks

**Proposed Solution :**

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Manually written digits are of a different size, thickness, position and direction. In this manner, various difficulties must be considered to determine the issue of handwritten digit recognition.
2.	Idea / Solution description	To solve this problem, we are going to implement a classification algorithm to recognize the handwritten digits. This algorithm will be effective in order to recognize digits which are of different compositions.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"><li>*Strategy for perceiving and arranging transcribed digits.</li><li>*Can be used offline</li><li>*Provided more data sets for more accuracy</li><li>* The uniqueness and assortment in the composition styles of various individuals additionally influence the example and presence of the digits.</li></ul>
4.	Social Impact / Customer Satisfaction	The main social impact of this work is to ensure effective and reliable approaches for recognition of handwritten digits and make banking operations easier and error free. Customers will feel at ease, as it is easy and convenient to use. As the accuracy is acceptable, this can have many applications.
5.	Business Model (Revenue Model)	This novel method for Handwritten Digit Recognition System can be approached by many industries which needs this application including, programmed bank checks, postal locations and tax documents and so on. Humans recognizing the handwritten digits with their naked eye can be difficult at times as it of different sizes, thickness, direction and ca also lead to making errors due to these factors. This is when our proposed solutions comes into help. We provide different data sets which helps in recognition with accuracy, so that human making errors can be avoided respectively.

6.	Scalability of the Solution	Financial and other business organizations such as banks are facing issues in Recognizing written digits such as in cheques etc. This can be handled by our handwritten digit recognition project as they expand into different business domains without impacting performance. Our proposed solution is scalable as it is dynamic and also trained using AI and deep learning Models.
----	-----------------------------	--