PROJECT DESIGN PHASE-1

PROPOSED SOLUTION TEMPLATE

DATE	27 Septemper 2022
TEAM ID	PNT2022TMID31523
PROJECT NAME	A Novel Method for Handwritten Digit Recognition System
MAXIMUM MARKS	2 Marks

Proposed Solution Template :

S.NO	Parameter	Description
1.	Problem Statement (Problem to be solved)	**Statement-**The handwritten digit recognition is the capability of computer applications to recognize the human handwritten digits. **Description:** It is a hard task for the machine because handwritten digits are not perfect and can be made with many different shapes and sizes.
2.	Idea / Solution description	• It is the capability of a computer to fetch the mortal handwritten integers from different sources like images, papers, touch defences. • It allows user to translate all those signature and notes into electronic words in a text document format and this data only requires far less physical space than the storage of the physical copies. • The algorithm used is Convolution Neural Network(CNN). This will prepare the trained model which will be used to classify the digits present in the test data. Thus, we can classify the digits present in the images as: Class 0,1,2,3,4,5,6,7,8,9.

3.	Novelty / Uniqueness	• Novelty in handwritten papers might include, among other things, a change in the writer, character properties, writing attributes, or overall document appearance. Instead of examining each element separately, we believe that an integrated agent capable of processing known characters and novelties. • Accurately recognize the digits rather than recognizing all the characters like OCR.
4.	Social Impact / Customer Satisfaction	• Artificial Intelligence developed the app called Handwritten digit Recognizer. • It converts the written word into digital approximations and utilizes complex algorithms to identify characters before churning out a digital approximation.
5.	Business Model (Revenue Model)	• This system can be integrated with traffic surveillance cameras to recognize the vehicle's number plates for effective traffic management. • Can be integrated with Postal system to identify and recognize the pin-code details easily. •The applications where these handwritten digit recognition can be used are Banking sector where it can be used to maintain the security pin numbers, it can be also used for blind peoples by using sound output.
6.	Scalability of the Solution	• Ability to recognise digits in more noisy environments. • There is no limit in the number of digits it can be recognized.