Project Design Phase-I

Team ID	PNT2022TMID29644
Project Name	Project – A Novel method for Handwritten digit recognition

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	• This is a collection of thousands of handwritten pictures used to train classification models using Machine Learning techniques. • As a part of this problem statement, We will train a multilayer perceptron using Tensorflow-v2 to recognize the handwritten digits.
2.	Idea / Solution description	• The handwritten digit recognition is the solution to this problem which uses the image of a digit and recognizes the digit present in the image.
3.	Novelty / Uniqueness	• Handwritten digit recognition is the ability of a computer to recognize the human handwritten digits from different sources like images, papers, touch screens, etc and classify them into 10 predefined classes (0-9). • This has been a topic of boundless-research in the field of deep learning.
4.	Social Impact / Customer Satisfaction	• The system not only produces a classification of the digit but also a rich description of the instantiation parameters which can yield information such as the writing style. • The generative models can perform recognition driven segmentation.
5.	Business Model (Revenue Model)	• Input module • Image processing module Segmentation • module Feature extraction module • Data set training module Classification module
6.	Scalability of the Solution	• The accuracy of the result for the training data set is 99.98%, and 99.40% with 50% noise by using MNIST. Even we can improve this model to achieve the better results by training different types of datasets.