Project Design Phase-I
Proposed Solution
Template

Date	03 October 2022
Team ID	PNT2022TMID16247
Project Name	A Novel Method for Handwritten Digit Recognition System
Maximum Marks	2 Marks

Proposed Solution:

SL. No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	➢ The user need to recognize the handwritten digits because it is useful to solve complex problems and make human job easier so that would be useful for recognition of different handwriting very effectively and quickly.
2.	Idea / Solution description	➢ The project will provide a way to analyze the handwritten text from an uploaded image and will display recognized characters in digital text for our usage and storage.
3.	Novelty / Uniqueness	➢ The dataset that is been collected for the analysis of the handwriting for prediction will be trained with deep learning methodology which gives a more accurate result of the handwriting, compared to the other ways the project had been implemented. ➢ The dataset will contain thousands of handwriting variations so that any style of handwriting can be recognized.
4.	Social Impact / Customer Satisfaction	➢ The impact will be that the students will be able to convert handwritten characters to digitalized text which can save a lot of time and can be stored digitally saving a lot of storage compared to images. ➢ Handwritten notes, books and memoirs can be digitalized easily without needing to type the whole content again.
5.	Business Model (Revenue Model)	See below
6.	Scalability of the Solution	➢ The project will be having the Python Flask for the development of the backend, which makes it easy to run on any web browsers and it will affect the collection of data from the user side and the sending of prediction analysis from the IBM Watson.

		➤ The server IBM Cloud will be used for making it work without any slow loading or delay of the prediction of the website.

5. Business Model (Revenue Model):

The business model describes how a company generates value. It mainly focuses on how to make a profit for the organization. It identifies the products or services the business plans to sell, its identified target market and any anticipated expenses. It is very essential for the current project since it is going to be a new business in the market. It needs financial support and they are been framed in the revenue model to make a successful place in the market.

The Revenue model describes how a company generates from the value it has generated for customers. It identifies which revenue source to pursue based on some of the questions that need to be asked for the amount of money that needs to be spent on each of the products. The major things focused on this are, what value to offer? How to price the value? and Who pays for the value?

For the project, A Novel Method for Handwritten Digit Recognition System, the following questions under the guidance of the revenue model is been framed to have an understanding of the money that is going to be used on various factors of development of the deployment and maintenance of the product.

1. Who pays? – Is it always the client? (Advertiser, Sponsor, Insurer)

The Insurer will be paying for the product because the product will be given insurance by any organization for the development and implementation and maintenance of the product.

2. How much is paid? – Is it always fixed? (Auction, Volume Discount, Dynamic Pricing)

It depends on the number of customers going to use the product. That includes the students visiting the website per day so that the server maintenance will be allotted the money that needs to be paid on that basis. The amount paid is never fixed it is based on dynamic pricing.

3. What is paid? – Is it always money? (Data, Activities, Shares)

Money, Data and usage analytics is being paid in this project. The data that is been received from the users is collected for improving the deep learning model to recognize more handwriting variations.

4. How is paid? – Is it always directly? (Subscription, Credit, Lease)

It varies according to the maintenance of the product if it is going to be maintained on a large scale with the help of cloud providers that are GCP, AWS or servers. This case includes a subscription to be maintained either for a year or month wise.

5. For what is paid? – Is it always the product? (Per Add-On, Per Result, Per Use)

The money is been paid mostly only for the product alone, this is because it is only the product that needs money to be running the funds for the project. The Users can use the software freely to recognize text for up to 10 images per day. For Batch processing and unlimited use, the user should buy a subscription.