Project Planning Phase
Milestone and Activity List

Date	23 October 2022
Team ID	PNT2022TMID24883
Project Name	A Novel Method for Handwritten Digit Recognition System

TITLE	DESCRIPTION	DATE
IDEATION PHASE		
Literature Survey & Information Gathering	Literature survey on the selected project & gathering information by referring the, technical papers, research publications etc.	03 SEPTEMBER 2022
Prepare Empathy Map	Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements.	10 SEPTEMBER 2022
Problem Statement	List of problem in the project.	10 SEPTEMBER 2022
Brainstorm And Idea Prioritization	List the by organizing the brainstorming session and prioritize the top 3 ideas based on the feasibility & importance.	17 SEPTEMBER 2022
PROJECT DESIGN PHASE-I		
Proposed Solution	Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, social impact, scalability of solution, etc.	24 SEPTEMBER 2022
Problem Solution Fit	Prepare problem - solution fit document.	01 OCTOBER 2022

Solution Architecture	Prepare solution architecture document.	01 OCTOBER 2022
PROJECT DESIGN PHASE-II		
Customer Journey	Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit).	08 OCTOBER 2022
Functional Requirement	Prepare the functional requirement document.	15 OCTOBER 2022
Data Flow Diagrams	Draw the data flow diagrams and submit for review.	15 OCTOBER 2022
Technology Architecture	Prepare the technology architecture diagram.	15 OCTOBER 2022
PROJECT PLANNING PHASE		
Sprint Delivery Plan	Prepare the Product Backlog, Sprint Planning, Stories, and Story points.	22 OCTOBER 2022
Prepare Milestone & Activity List	Prepare the milestones &activity list of the project.	22 OCTOBER 2022
PROJECT DEVELOPMENT PHASE		
Project Development - Delivery of Sprint-1, 2, 3 & 4	Develop & submit the developed code by testing it.	IN PROGRESS

UNDERSTANDING THE DATA

Importing the required libraries	Import the necessary libraries for the model to run The dataset for this model is imported from the Keras module.	IN PROGRESS
Loading the data	The dataset for this model is imported from the Keras module. We split the data into train and test. Using the training dataset we train the model and the testing dataset is used to predict the results.	IN PROGRESS
Analyzing the data	The dataset is analyzed for insights	IN PROGRESS
Reshaping the data	As we are using Deep learning neural network, the input for this network to get trained on should be of higher dimensional. Our dataset is having three-dimensional images so we have to reshape them too higher dimensions	IN PROGRESS
Applying one hot encoding	One hot encoding is a process by which categorical variables are converted into a form that could be provided to ML algorithms to do a better job in prediction. We apply One-Hot Encoding in order to convert the values into 0's and 1's.	IN PROGRESS

MODEL BUILDING

Add CNN layers	The Sequential model is a linear stack of layers. You can create a Sequential model by passing a list of layer instances to the constructor.	IN PROGRESS
Compiling the model	With both the training data defined and model defined, it's time to configure the learning process. This is accomplished with a call to the compile () method of the Sequential model class.	IN PROGRESS
Train the model	The model is trained on the provided data	IN PROGRESS
Observing the metrics	Printing the metrics which lists out the Test loss and Test accuracy. Loss value implies how poorly or well a model behaves after each iteration of optimization. An accuracy metric is used to measure the algorithm's performance in an interpretable way.	IN PROGRESS
Test the model	A sample input is given and the actual output and expected output are compared.	IN PROGRESS

Save the model	our model is to be saved for future purposes. This saved model can also be integrated with an android application or web application in order to predict something.	IN PROGRESS
Test with saved model	Tests are run on the saved model for evaluation	IN PROGRESS

APPLICATION BUILDING

Creating an HTML file	We use HTML to create the front-end part of the web page. Here, we created 2 html pages- index.html, web.html. index.html displays home page. web.html accepts the values from the input and displays the prediction.	IN PROGRESS
Build python code part -1	Build the flask file 'app.py' which is a web framework written in python for server-side scripting. Let's see step by step procedure for building the backend application.	IN PROGRESS
Build python code part -2	The primary code for analyzing user input and providing prediction is present here.	IN PROGRESS
Run the application	Open anaconda prompt from the start menu. Navigate to the folder where your python script is. Now type "python app.py" command	IN PROGRESS

TRAIN MODEL ON IBM

Train model on IBM	The model is trained on IBM and integrated with the built flask application.	IN PROGRESS
Register for IBM cloud	To register for the IBM cloud	27 AUGUST 2022