Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID24889
Project Name	Project – A Novel Method For Handwritten Digit Recognition Model
Maximum Marks	4 Marks

Technical Architecture:

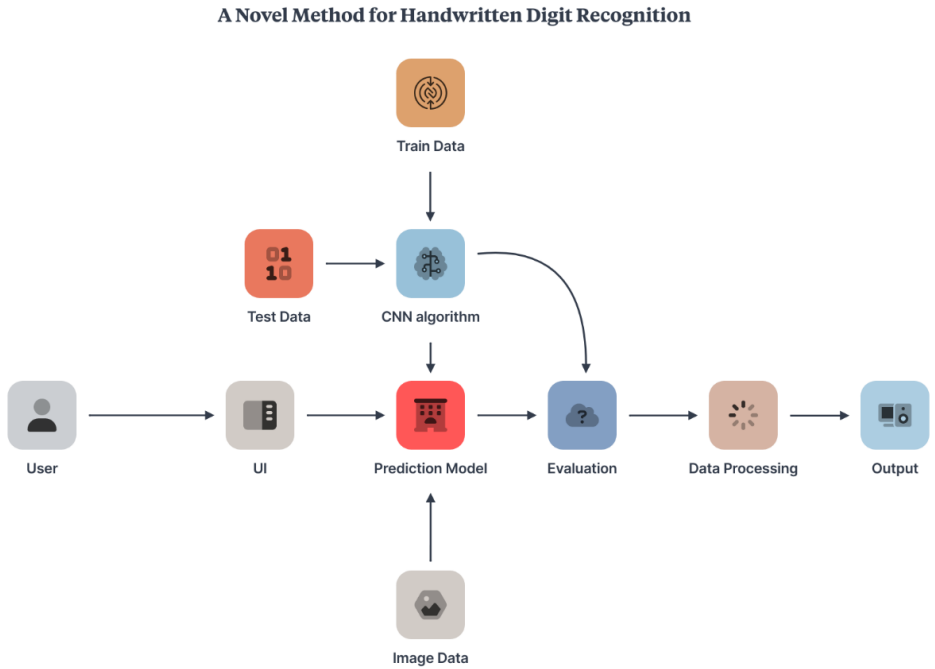

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Our UI will be user friendly as it will use simple and interactive methods to engage them.	HTML, CSS, JavaScript
2.	Application Logic-1	We get the input in the form of image data from the user.	Python
3.	Application Logic-2	Convert the obtained input image into text.	IBM Watson ITT service
4.	Application Logic-3	We make use of Machine learning the perform all the tasks.	IBM Watson ML services
5.	Database	Image-data, PNG	MySQL
6.	Cloud Database	User's data will be stored in the cloud and the user have to access data from cloud to make full-use of our service	IBM DB2
7.	File Storage	All the static data for running the base product will be stored here.	IBM Object Storage
8.	External API-1	API is used to make use of an already existing application's purpose as a component for our own product.	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Human handwriting is complex and Unique for each individual. In order for the application to make sense of this complex rules and traditions followed by different people, we make use of machine learning to train the model.	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	We make use of Open-source Framework to ease workload and improve efficiency.	AngularJS, Flask, Python
2.	Security Implementations	Security – user privacy	SHA-256, Encryptions, IAM Controls
3.	Scalable Architecture	Provide custom services on user request	3rd Image editing
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	3rd Party Domain hosting
5.	Performance	Lightweight, efficient and minimal space consumption website	