

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

Date	10October 2022
Team ID	PNT2022TMID21352
Project Name	Project - A Novel Method for Handwritten Digit Recognition System
Maximum Marks	4 Marks

Technical Architecture:

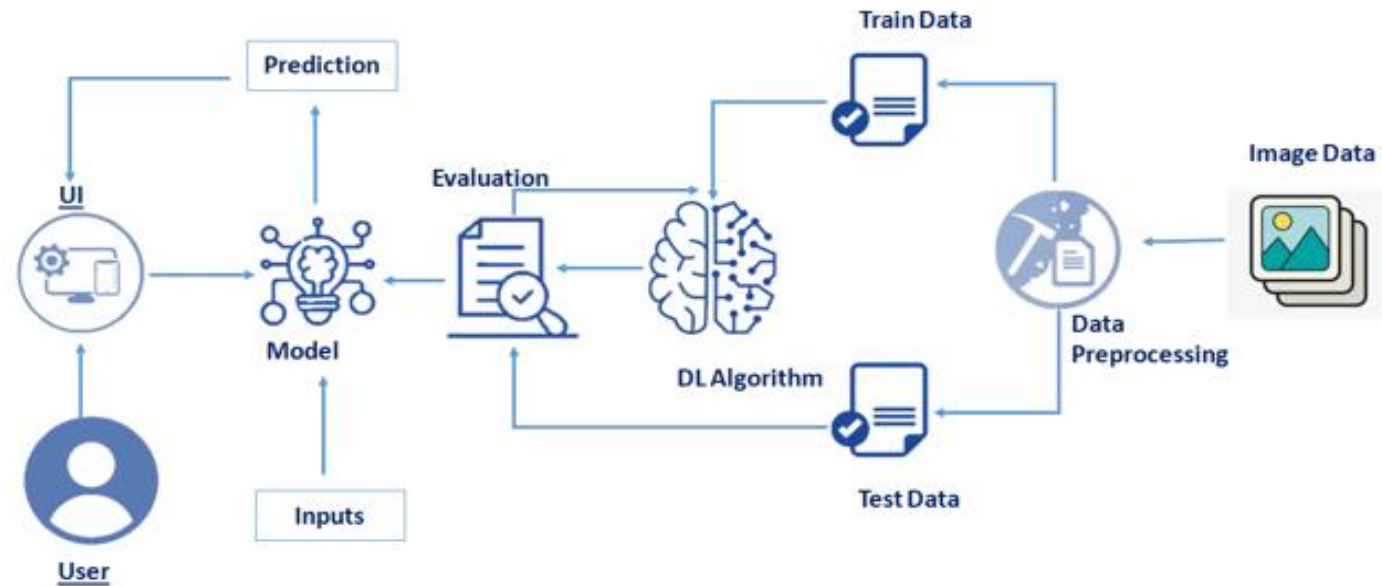


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The communication protocol being used in the proposed solution might act as an interface the way like WiFi, Bluetooth and ZigBee	MIT APP
2.	Application Logic	Numerous apps have been developed to help you convert your scanned documents into digital text. All those apps use a technology called Optical Character Recognition, or OCR. Upload a photo of your handwritten notes or use a scanner and transfer it to your computer, tablet, iPhone, or android device.	Python, IBM Watson STT service
3.	Database	Data to be segregated and secured in the form of relational DBMS.	MySQL
4.	Cloud Database	Database Service on Cloud	IBM Cloudant
5.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
6.	External API-1	The MNIST database is a large database of handwritten digits	training and testing in the field of machine learning.
7.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	an open-source Python library developed by the Google Brain labs for deep learning research, you will take hand-drawn images of the numbers 0-9 and build and train a neural network to recognize and predict the correct label for the digit displayed	TensorFlow technology
2.	Security Implementations	The developed application should be accessible in the	Encryptions, IAM Control

S.No	Characteristics	Description	Technology
		way it can only respond to the comments of the relevant users	
3.	Scalable Architecture	The app format comes the way easier to handle and operate.	Not yet determined
4.	Availability	The developed solution tends to be available in the market at any time	Not yet determined
5.	Performance	Highly proper and betterment functionalities are to be ensured in the designed solution	Not yet determined