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

Date	03 October 2022
Team ID	PNT2022TMID32721
Project Name	Project – A Novel method for handwritten digit recognition system
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

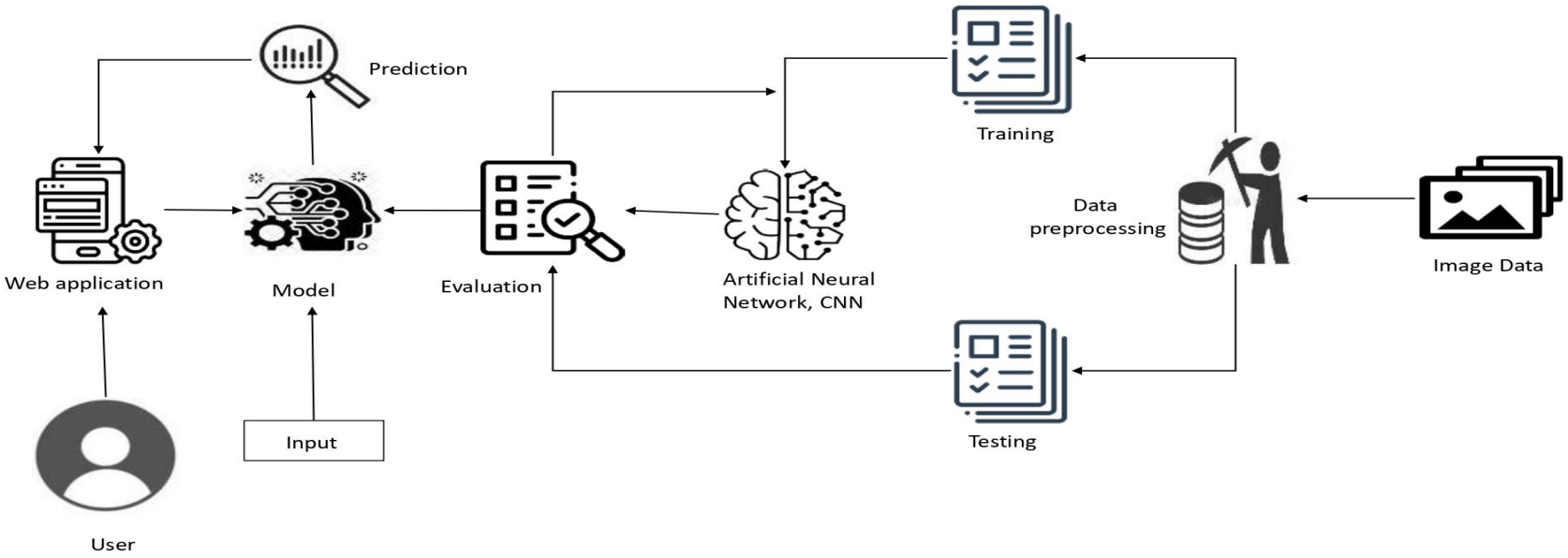

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interacts with application for the recognition of the handwritten digits.	HTML, CSS, JavaScript etc.
2.	Image processing/ Data processing	User uploads or process the data in our application	Jupyter notebook(Python)
3.	Database	Digits dataset will be stored for training and testing the data to predict the output	MNIST dataset
4.	Cloud Database	Database Service on Cloud	IBM Watson cloud
5.	File Storage	User requirements will be processed through the file	Cloud -> drive
6.	Machine Learning Model	Image processing, data visualization and evaluation can be done	ANN,CNN,RNN algorithms
7.	Infrastructure (Server / Cloud)	Cloud based web application	Cloud application

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	It is made freely available code for application notification and redistribution	Jupyter notebook from anaconda navigator, JavaScript
2.	Security Implementations	Request for authentication using encryption	Encryption algorithm
3.	Scalable Architecture	This application must remain resilient in the face of attacks. The behaviour of the application must be correct and predictable	HTML, CSS, JS, PYTHON, FLASK, IBM Cloud

S.No	Characteristics	Description	Technology
4.	Availability	The web dashboard must be available to user's 99.9 percent of the time every month during business hour.	IBM Cloud hosting
5.	Performance	The application must be scalable enough to support 10,000 visits at the same time while maintaining optimal performance.	IBM Cloud balancing