Technology Stack (Architecture & Stack)

Team ID	PNT2022TMID35498
Project Name	A Novel Method for Handwritten Digit Recognition System

Technical Architecture

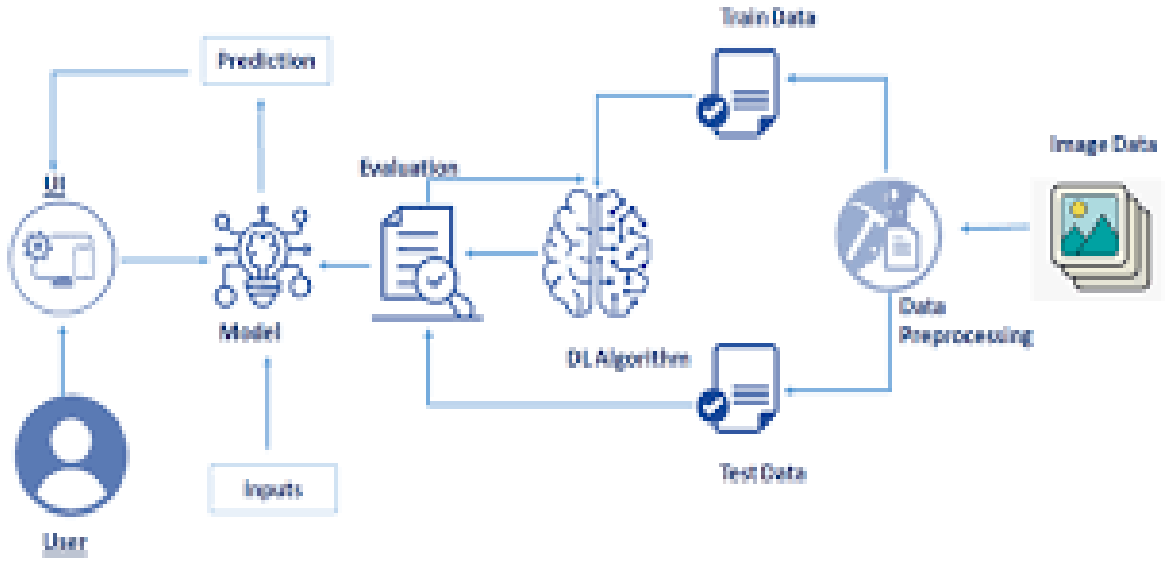

Table-1: Components & Technologies

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, React JS
2.	Prediction	How the model predicts the information in the cheque	Python
3.	Uploading input	The process of uploading the file to the server storage to make the predictions	Flask
4.	Database	Data Type, Configurations etc.	MySQL
5.	Cloud Database	Database Service on Cloud	IBM DB2
6.	File Storage	File storage requirements	IBM Block Storage
7.	Machine Learning Model	To analyse and predict the handwritten input from the input image	Yolo / CNN

Table-2: Application Characteristics

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Deep learning models are used to predict the values present in the input image. Additionally, the communication between the client and the server is done using Flask.	TensorFlow, Kera's, Flask, React
2.	Security Implementations	The cheque contains confidential details and so the communications are encrypted.	Crypto-js
3.	Scalable Architecture	To increase the availability, the architecture is made scalable.	Python flask
4.	Availability	The application is accessed only by employees in each bank. Only the ones who process the cheque will only require this and makes the service available all the time.	IBM cloud
5.	Performance	Time per request processing is noted for future improvements.	Online deployment to IBM cloud