

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

Date	31 October 2022
Team ID	PNT2022TMID52913
Project Name	Project - Smart Lender - Applicant Credibility Prediction For Loan Approval
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>

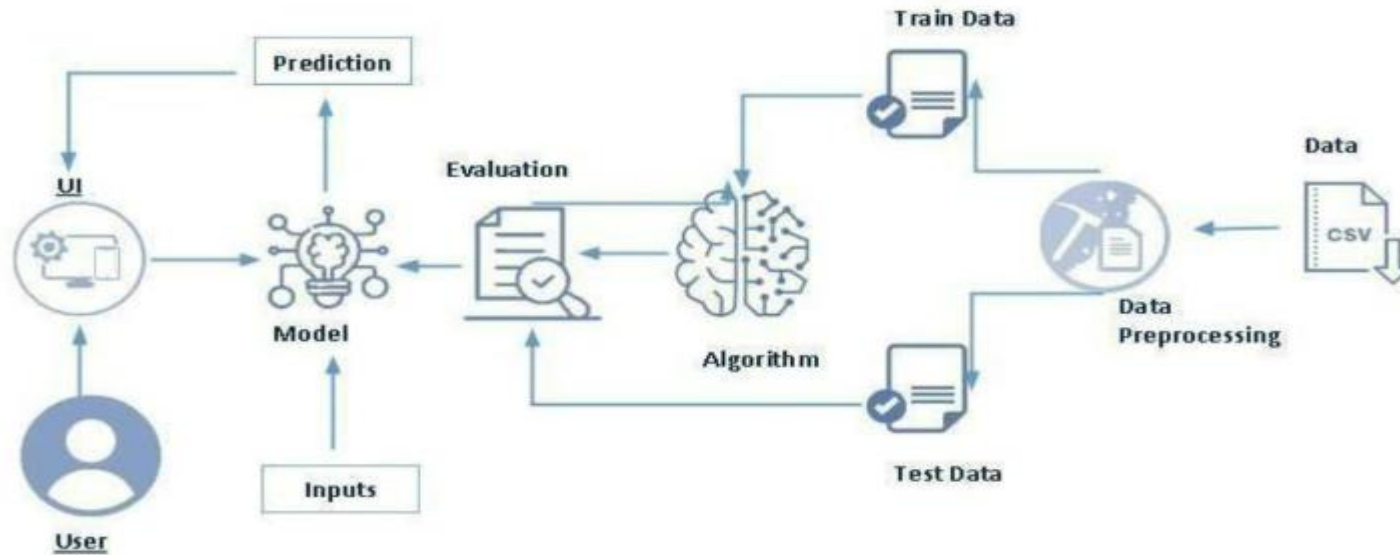


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	UserInterface	Users interactwiththe application withthe help of a web UI	HTML, CSS etc.
2.	Buildingapplication	GettinguserinformationfromUIand feeding itto MLmodel	PythonFlask
3.	Visualizingand analysing data	Reading and understanding the data properly with the help of visualization and analyzing techniques.	Python pandas, numpy, pickle, matplotlib, seaborn
4.	Pre-processing orcleaning data	Handling missing values, Handling categorical data, Handling outliers, Scaling Techniques	Pythonpandas
5.	Database	Loan Approval dataset	.csv file
6.	Cloud Database	Deploying the model on cloud	IBMcloud
7.	Machine Learning Model	Using machine learning model forpredicting loan approval	Model buildingusingclassification algorithms such as Decision tree, Randomforest, KNN, and xgboost.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	IBMCloud
2.	Security Implementations	Its secures information and data	IBMcloud provides layered security controls across networkand infrastructure.
3.	Scalable Architecture	Its supports various data sizes	Web 3.0 IBMCloud
4.	Availability	Creating multiple pages for comfortable user interface experience	HTML, CSS, JavaScript
5.	Performance	Withstand huge data and process them without crashing.	Python

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>