

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

Date	15 October 2022
Team ID	PNT2022TMID27812
Project Name	SmartLender - Applicant Credibility Prediction for Loan Approval
Maximum Marks	4 Marks

Technical Architecture :

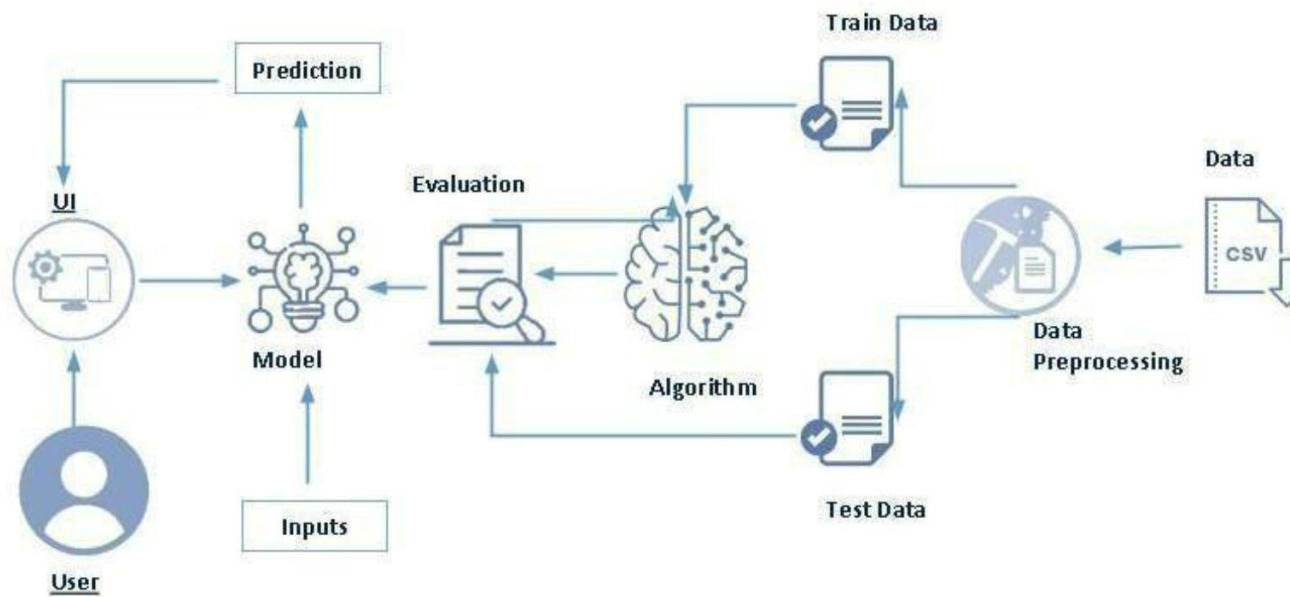


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	UserInterface	Users interact with the application with the help of a web UI	HTML, CSS etc.
2.	Building application	Getting user information from UI and feeding it to ML model	Python Flask
3.	Visualizing and 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 or cleaning data	Handling missing values, Handling categorical data, Handling outliers, Scaling Techniques	Python pandas
5.	Database	Loan Approval dataset	.csv file
6.	Cloud Database	Deploying the model on cloud	IBMcloud
7.	Machine Learning Model	Using machine learning model for predicting loan approval	Model building using classification 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 network and 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