Project Design Phase-II
Data Flow Diagram & User Stories

Team ID	PNT2022TMID12616
Project Name	Smart Lender - Application Credibility Prediction for Loan Approval

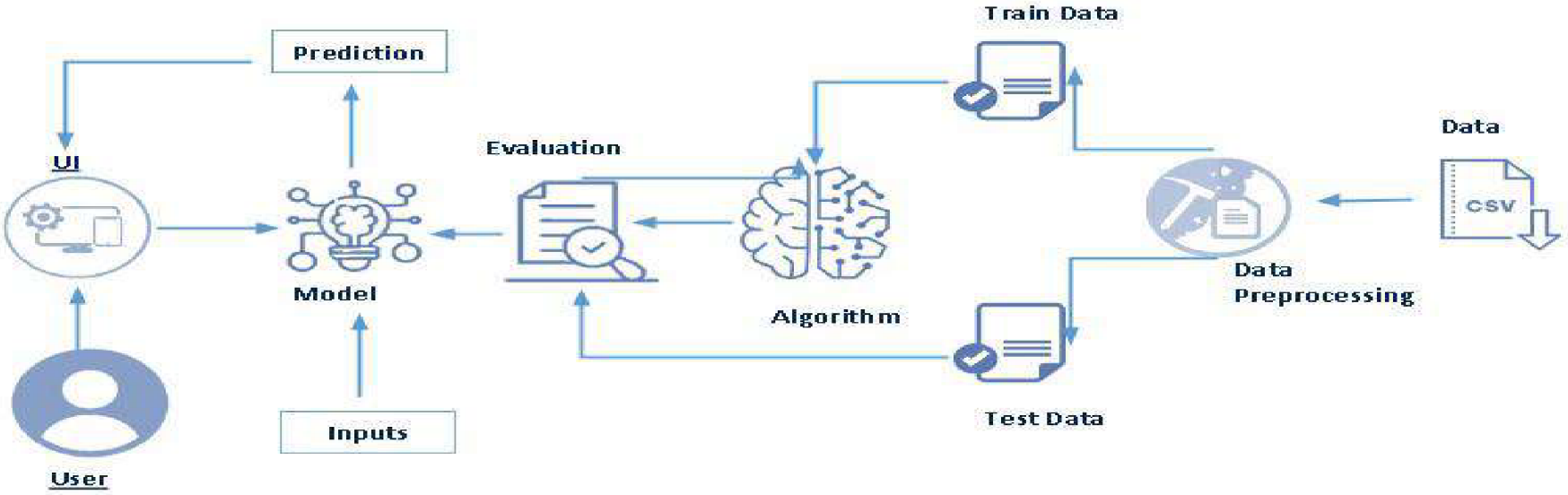

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How the user interacts with the application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Flask
2.	Loading data	Converting the csv file to python object	Python
3.	PreProcessing of data	Pre Processing and normalizing the data to get accurate results	Python
4.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
5.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
6.	Machine Learning Model	The k-nearest neighbors algorithm, also known as KNN or k-NN, is a non-parametric, supervised learning classifier, which uses proximity to make classifications or predictions about the grouping of an individual data point. XGBoost provides parallel tree boosting and is the leading machine learning library for regression, classification, and ranking problems. Decision Trees (DTs) are a non-parametric supervised learning method used for classification and regression. The random forest uses bagging and features randomness when building each individual tree to try to create an uncorrelated forest of trees whose prediction by committee is more accurate than that of any individual tree.	Classification models like XGBoost, KNN, Decision Tree and Random Forest

7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Flask
2.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Cloud Foundry, IBM Cloudant
3.	Availability	Justify the availability of applications (e.g. use of load balancers, distributed servers etc.)	Cloud Foundry
4.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Cloud Foundry