

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

Date	09 November 2022
Team ID	PNT2022TMID04175
Project Name	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

Smart Lender - Applicant Credibility Prediction for Loan Approval

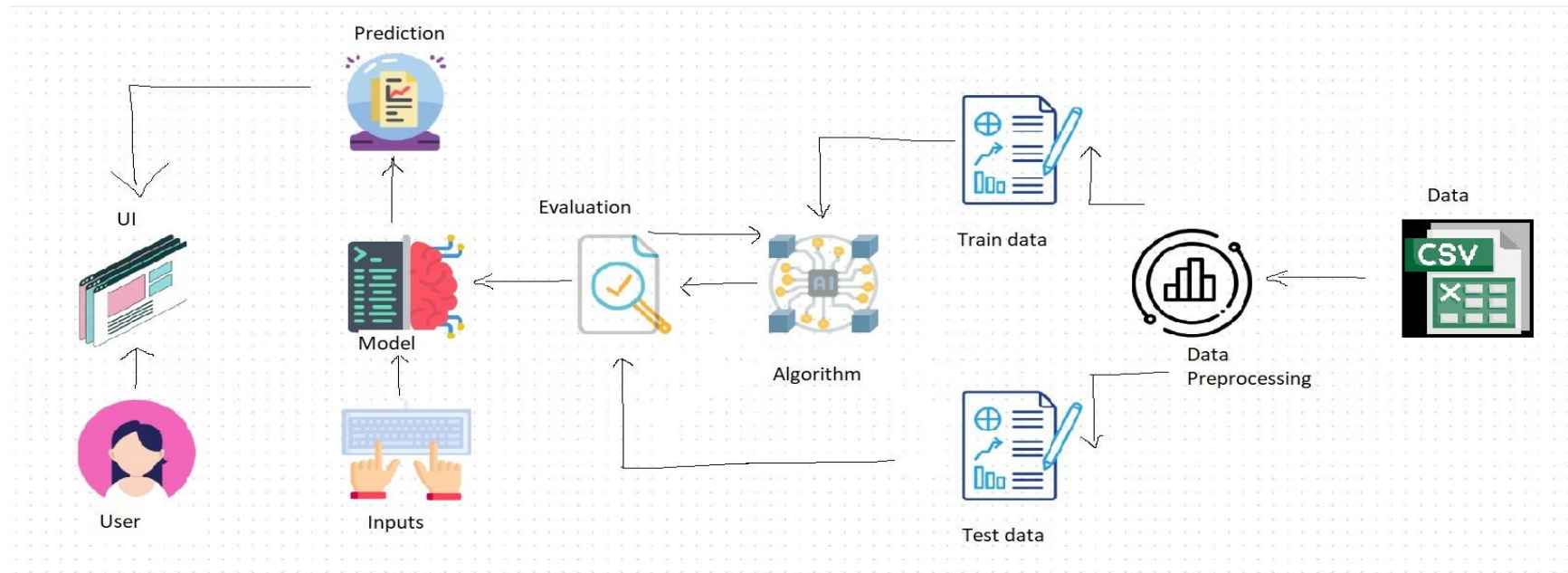


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI?	HTML, CSS, JavaScript
2.	Application Logic-1	User should enter their loan and personal details.	HTML, CSS, Python
3.	Application Logic-2	User details should be captured and sent to the model	Python, Flask
4.	Machine Learning Model	Run model on user details, perform encoding and make prediction	Python, Flask
5.	Application Logic-3	Display the prediction by the model on the webpage.	Python, Flask
6.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	IBM Cloud
7.	External API - 1	This API gets the latest stock news	Mboum API
8.	External API - 2	This API displays the live currency rate of 1USD in INR	Apilayer API
9.	External API - 3	This API displays the current stock price of a certain bank	Finnhub API

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	FLASK	Flask is a back-end framework, which means that it provides the technologies, tools, and modules that can be used to build the actual functionalities of the web app rather than the design or look of it.
2.	Performance	XGBoost	XGBoost is an optimized distributed gradient boosting library designed to be highly <i>efficient</i> , <i>flexible</i> and <i>portable</i> . It implements machine learning algorithms under the Gradient Boosting framework.

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>