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

Date	27 October 2023
Team ID	Team-592483
Project Name	Online Payments Fraud Detection using ML
Maximum Marks	4 Marks

Technical Architecture:

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

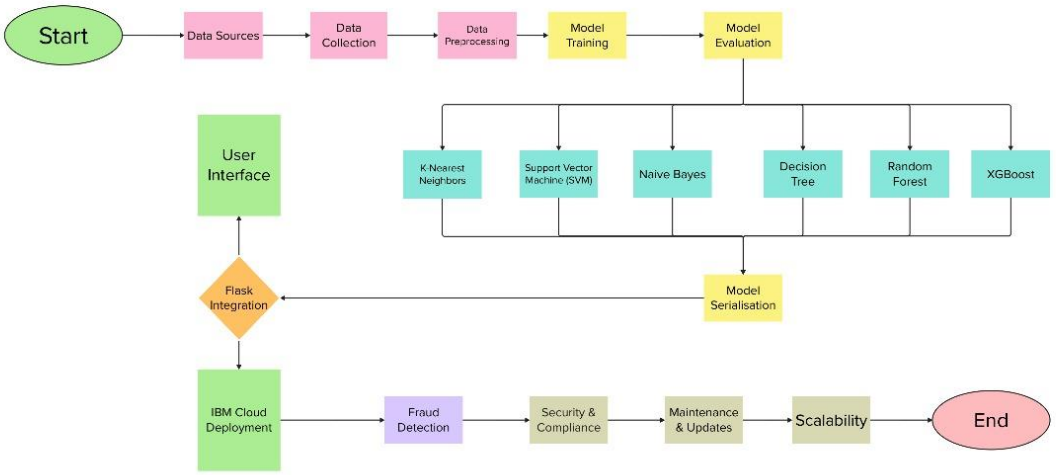

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript ,BootStrap
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	Flask
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM, IBM Cloudant etc.
7.	Machine Learning Model	Purpose of Machine Learning Model	Classification Model, etc.
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	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, Bootstrap, Scikit-learn
2.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Docker for containerization to ensure consistency across different environments.
3.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Deploying the application on distributed servers or using a serverless architecture
4.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Caching mechanisms to store frequently accessed data and reduce response times, Optimizing machine learning model performance for real-time classification