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

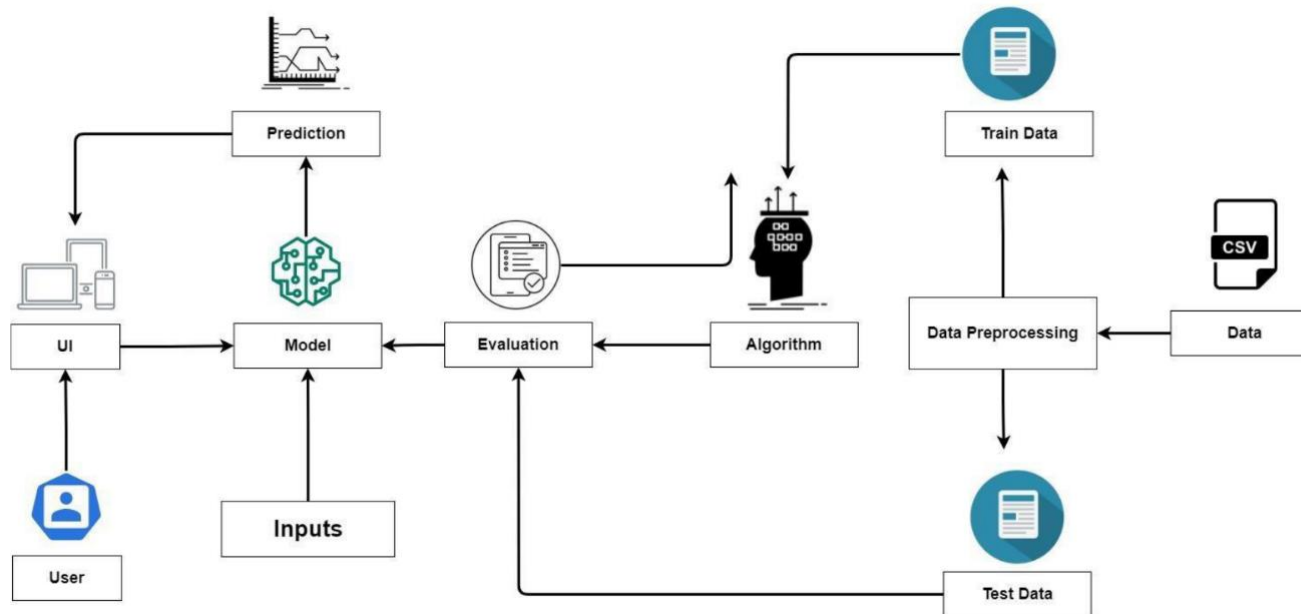| Date	01 November 2022
Team ID	PNT2022TMID44333
Project Name	Project - Developing a Flight Delay Prediction Model using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

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
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	python/ java
4.	Application Logic-3	Logic for a process in the application	Machine learning
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Data Preprocessing	To clean data	pandas,numpy
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Random forest,Object Recognition Model, etc.
11.	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	Technology of Opensource framework
2.	Security Implementations	Used to identify the threats in the system	Authentication
3.	Scalable Architecture	Used to determine the user limit for the web application	Scalability Testing
4.	Availability	Running an application for a specific period of time	load testing
5.	Performance	Determines the behaviour of web application when it receives the extreme variations in Traffic	spike testing