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

Date	17 October 2022
Team ID	PNT2022TMID21212
Project Name	Developing a flight delay predictionmodel using machine learning
Maximum Marks	4 Marks

Technical Architecture:

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

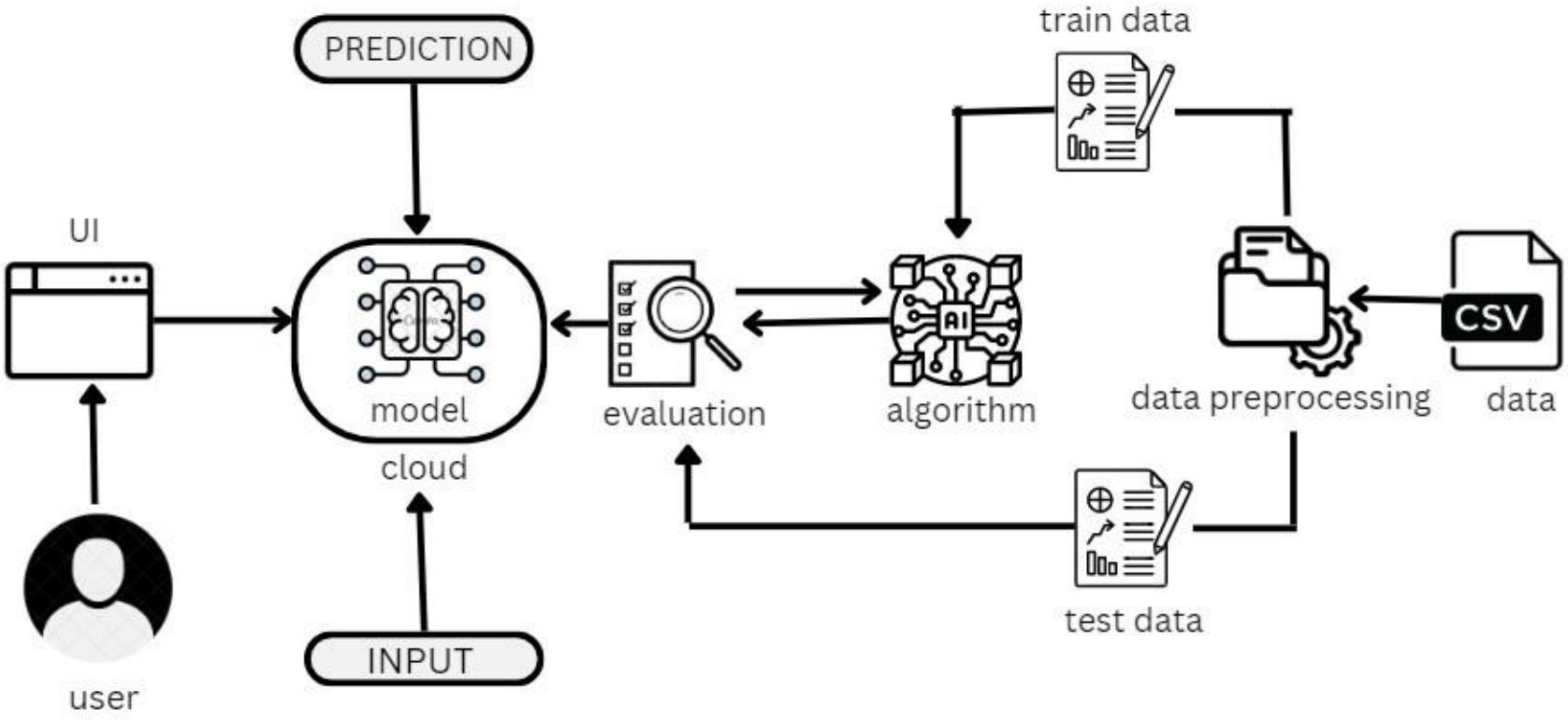

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g.,Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js /React Js etc.
2.	Application Logic-1	Using Python's regularization approach with Regression Analysis to create predictions about future delays	Python
3.	Application Logic-2	Build, run and manage AI models	IBM Watson Machine Learning service
4.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
5.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
6.	File Storage	File storage requirements	IBM Block Storage or Other StorageService or Local Filesystem
7.	External API-1	Defines communication between customer and the administration	Flask (Python), etc.
8.	Machine Learning Model	To predict flight delay model	Object Recognition Model, etc.
9	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Local host server on which flask runs Cloud Server Configuration: Cloud object storage	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 (python)
2.	Security Implementations	List all the security / access controls implemented,use of firewalls etc.	e.g., SHA-256, Encryptions, IAMControls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Flask or ML
4.	Availability	Justify the availability of application (e.g., use ofload balancers, distributed servers etc.)	Flask or ML
5.	Performance	Design consideration for the performance of theapplication (number of requests per sec, use of Cache, use of CDN’s) etc.	Flask or ML