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

Date	19 October 2022
Team ID	PNT2022TMID49841
Project Name	Predictive analysis for Aircraft engine

Technical Architecture:

Example: Predictive Analysis for aircraft engine using machine learning

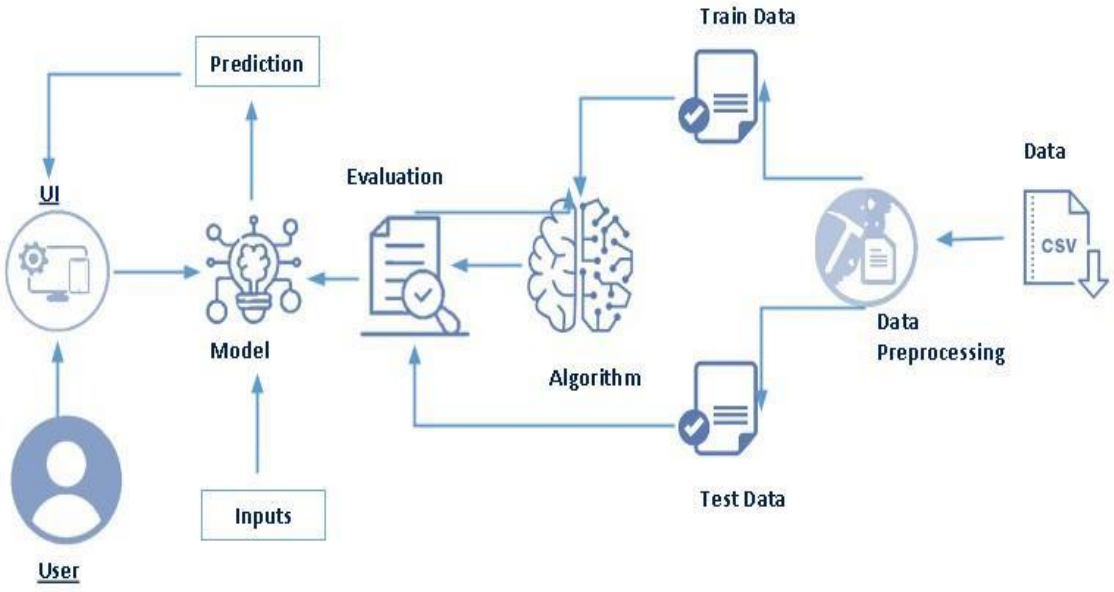

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	user interacts with application e.g. Mobile App, web application.	Python ,C
2.	Application Logic-1	Developing application	Python
3.	Application Logic-2	To add sensor and tracking the values(data)	IBM Watson STT service
4.	Application Logic-3	To detect the faults in the engine	IBM Watson Assistant
5.	Database	To create data base	MySQL, NoSQL, etc.

6.	Cloud Database	Database Service on Cloud	IBM Cloud etc.
7.	File Storage	Storing data	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	To deliver accurate and precious data	IBM Weather API
9.	External API-2	To verify data	Aadhar API
10.	Machine Learning Model	To identify and locate objects	Object Recognition Model
11.	Infrastructure (Server / Cloud)	To compile and run the apps locally	Local, Cloud Foundry, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Demonstrate how to combine realtime aircraft data with analytics to create a solution for predictive analysis engine monitotring	Node RED
2.	Security Implementations	Advanced Encryption standard, Data Encryption standard ,RSA algorithm	Encryption
3.	Scalable Architecture	More number of passengers can travel with safety	Automated bootstrapping
4.	Availability	Increase the availability	Cloud computing
5.	Performance	High performance	Adaptive Contention Window

References:

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