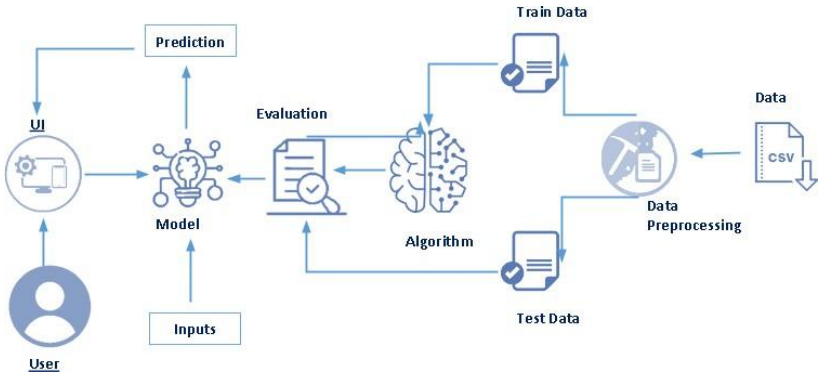
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	31 October 2022
Team ID	PNT2022TMID13270
Project	Developing a vehicle performance analyzer using machine learning
Maximum Marks	4 Marks

Technical Architecture:



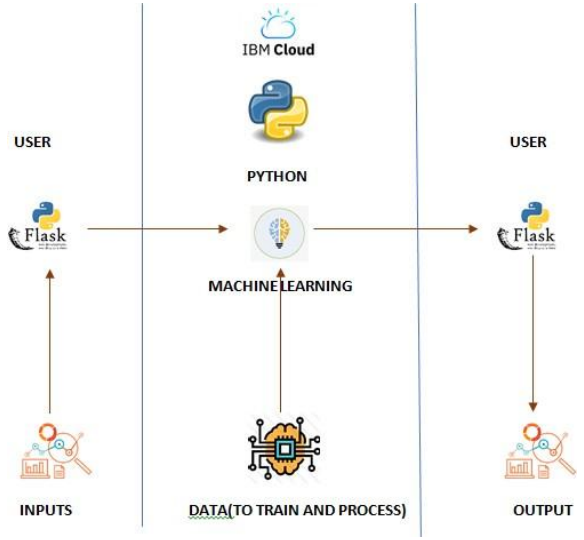


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	Python-Flask
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2,
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	Purpose of External API used in the application	IBM Weather API
9.	External API-2	Purpose of External API used in the application	Flight Confirmation API
10.	Machine Learning Model	Purpose of Machine Learning Model	Evaluation and Prediction Model
11.	Infrastructure (Server / Cloud)	Application Deployment	IBM Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Python-Flask
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Encryptions, IAM Controls
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Python
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	IBM Cloud
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Python