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

Date	13 November 2023
Team ID	Team-592951
Project Name	Project - Car Purchase Value Prediction
Maximum Marks	4 Marks

Technical Architecture:

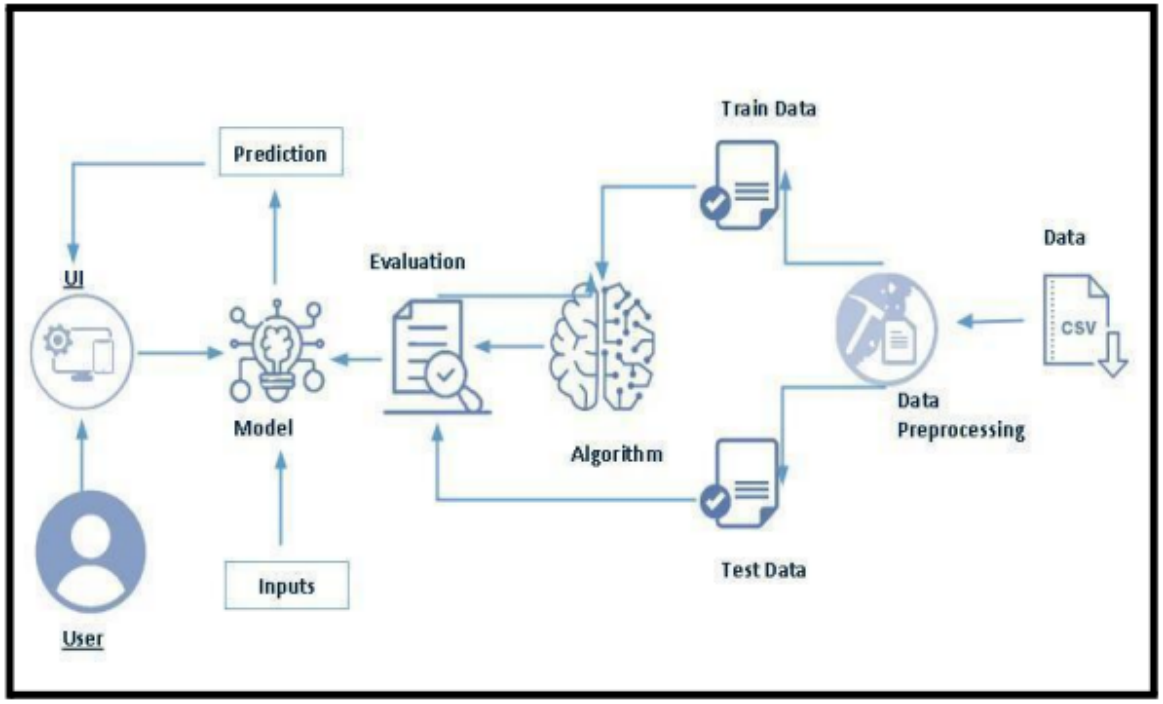

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI and Mobile App for user interaction	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Core application logic for data processing and prediction	Python
3.	Application Logic-2	Integration with a third-party Speech-to-Text service	IBM Watson STT service
4.	Application Logic-3	Integration with a third-party conversational AI service	IBM Watson Assistant
5.	Database	Storage for user data and application configurations	MySQL, NoSQL, etc.
6.	Cloud Database	Cloud-based database service for scalability	IBM DB2, IBM Cloudant etc.
7.	File Storage	Storage for file-related requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Integration with an external weather API for data	IBM Weather API, etc.
9.	External API-2	Integration with an external identity verification API	Aadhar API, etc.
10.	Machine Learning Model	Incorporation of ML model for car value prediction	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Cloud :	IBM Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Usage of open-source frameworks in the application	Flask, scikit-learn, React Js, etc.
2.	Security Implementations	Implementation of security measures such as encryption, access controls, and firewalls	HTTPS, JWT, IAM Controls, etc.
3.	Scalable Architecture	A scalable architecture, possibly microservices or serverless, to handle varying workloads	Microservices, Serverless
4.	Availability	Ensuring high availability through load balancing and distributed server configurations	Load Balancers, Distributed Servers
5.	Performance	Design considerations for performance, including caching mechanisms and use of CDNs	Caching, CDN, Load Balancing