

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

Date	03 October 2022
Team ID	PNT2022TMID43312
Project Name	Project – Car Resale Value Prediction
Maximum Marks	4 Marks

Technical Architecture:

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

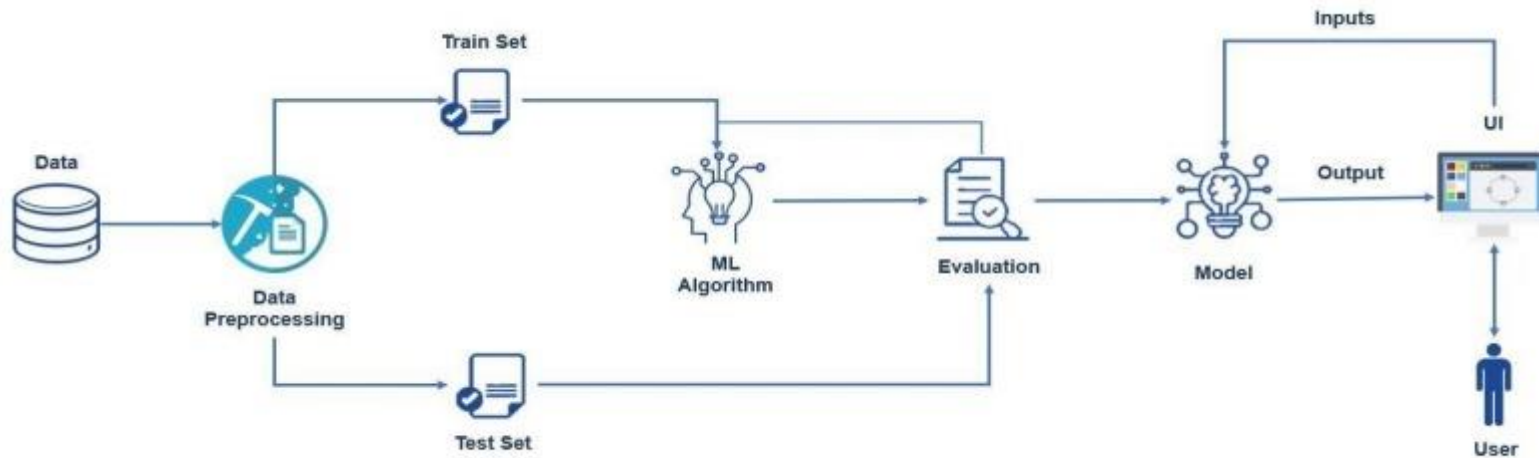


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interaction with application, Web UI	HTML, CSS, JavaScript
2.	Application Logic-1	Collection and pre-processing of data	Python
3.	Application Logic-2	Mapping the feature set and predicting the value	Python
4.	Application Logic-3	Sending invoice, updates and alerts to users	IBM Watson Assistant, STT Service
5.	Database	Data Type, Configurations provided by users	MySQL, NoSQL
6.	Cloud Database	Handles database services on Cloud	IBM DB2, IBM Cloudant
7.	File Storage	File storage requirements ensuring high performance even with large data	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	API offers the interface for the users to connect	IBM Watson API, etc.
9.	External API-2	API provides the transparency and meets the requirements for the performance	IBM Watson
10.	External API-3	Communication with both user and the application is taken care by API's	IBM API Connect etc.
11.	Machine Learning Model	Implements a feature set and predicts the value	Regression Models, Feature Differentiation Model, Object Recognition Model, etc.
12.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Kubernetes, etc

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	A software for which the source code is made freely available and modified according to the requirement	Tensorflow, Jupiter Notebook
2.	Security Implementations	Secure monitoring of features provided by the users	IBM encryption services
3.	Scalable Architecture	Able to match the conditions provided by the user to the available feature map	Machine Learning models
4.	Availability	Usage of data and availability of information regarding cars and price can be tracked anytime	Tensorflow, API's
5.	Performance	High performance for any large data and can quickly predict the values.	API and regression models