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

Date	03 October 2022
Team ID	PNT2022TMID05680
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

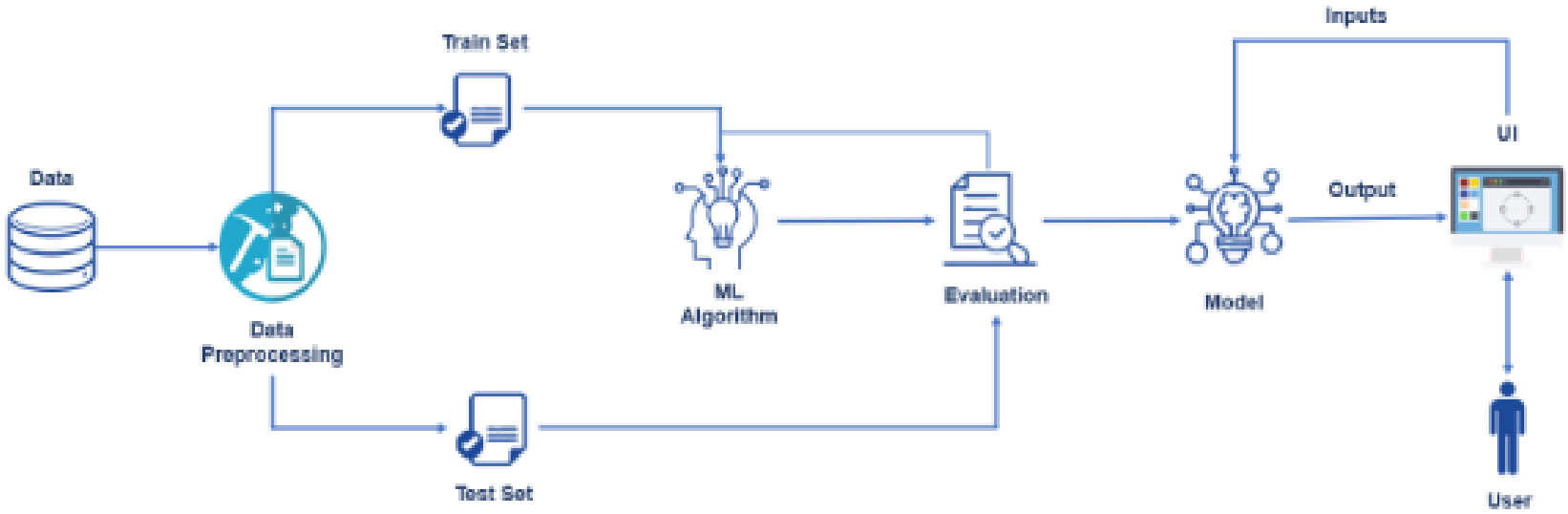

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with application using the website using any web browser.	HTML, CSS, JavaScript, Flask
2.	Input the data	Enter the required data in the website	HTML, CSS
3.	Send the data	Get the data entered in the website	Flask
4.	Prediction	Predict the resale value from the entered data	Python
5.	File Storage	The storage is required for the trained model.	Cloud Object Storage
6.	Python API - watchdog	Python API and shell utilities to monitor file system events.	Python
7.	Machine Learning Model	The random forest regressor fits a number of classifying trees on various sub-samples of dataset and uses averaging iy improve the predictive accuracy and control over-fitting.	Random forest regressor
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System Local Server Configuration:	Local

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask is used for developing web applications using python, implemented on Werkzeug and Jinja2. Advantages of using Flask framework are: There is a built-in development server and a fast debugger provided.	Python, HTML
2.	Security Implementations	The security is given to the details with the help of POST method and the security methods in the flask.	OWASP

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	Three-tier architecture is a architecture that organizes applications into three tiers: the presentation tier, or user interface; the application tier, where data is processed; and the data tier, where the data associated with the application is stored and managed.	IBM Cloud
4.	Availability	The application will be available 24/7 with the help of distributed servers.	IBM cloud satellite
5.	Performance	It can handle about 150 requests/second	IBM Cloud