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

Date	03 October 2022
Team ID	PNT2022TMID46020
Project Name	Project - Car Resale Value Prediction
Maximum Marks	4 Marks

Technical Architecture:

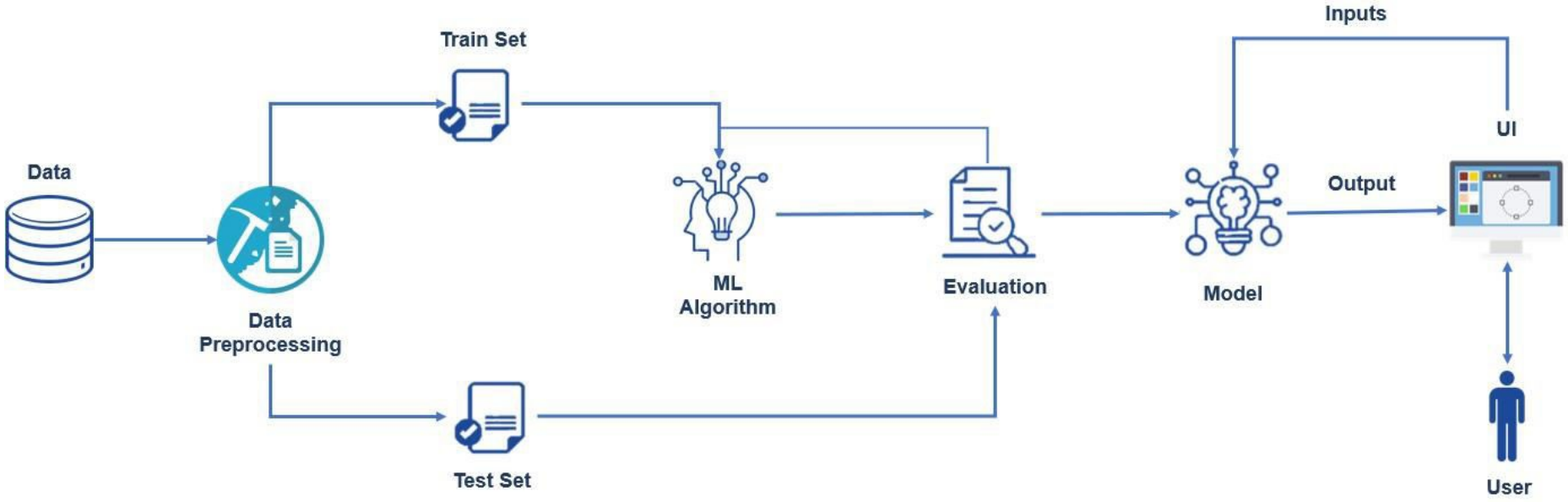

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Data Pre - Processing	Checking if the given data has any missing values, duplicate values, outliers and other noises that can affect the performance of the model.	Python, Pandas, Numpy, Matplotlib, Seaborn.
3.	Splitting the DataSet	The data set is split into test and train data for the model.	Python, Sk - Learn
4.	Predicting the values	After the model is trained using various machine learning algorithms, some code is written to predict the value of a used car.	Python, Sk - Learn
5.	Database	The data is stored in the database.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Machine Learning Model	There are various Machine Learning Models that can be used like Linear Regression, Multi-Linear Regression, Decision Tree, Random Forest, SVM etc.	Python, Sk - Learn

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technolog
1.	Open-Source Frameworks	Anaconda Navigator, Jupyter Notebook, Python, Flask.	Python
2.	Security Implementations	Aware of Fraud and Scams, Protection of password and account details.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Whether demand increases gradually or abruptly, scalable web architecture can accommodate any load without compromising the application's integrity.	Microservies, Progressive Web Apps (PWA)
4.	Availability	Availability of application like load balancers, distributed servers etc	IBM Cloud
5.	Performance	Good Performance is expected.	IBM Cloud