Scope of Project

I. SCOPE INTRODUCTION

 Increase sales of used cars from the current Inventory available on Tesla Website

- **The developer is required to utilize data available on website :
  https://www.tesla.com/inventory/used/m3?arrangeby=plh&zip=94544 for each car model.**
- **Data fetched must be stored in a CSV file that should be password protected and stored on the organization's cloud storage.**
- **Data Cleaning must be done as per project standard guidelines.**
- **Use multiple regression to identify the relationship between the price of cars with other attributes.**
- **Develop a Tableau Visualization and explain your analysis as a caption on the sheet.**
- **Develop technical documents.**

II. STAKEHOLDERS

    A. **INTERNAL STAKEHOLDERS**

- **Technical supervisor: Mr.X (x.org.com)**
- **Cross Team Member: Ms.Y (y@org.com)**
- **Charge code supervisor: Mrs.V (v@org.com)**
- **Authorizations to Database : Mr.P (p@org.com)**

    B. **EXTERNAL STAKEHOLDERS**

- **Stakeholder 1**
- **Stakeholder 2**

III. RISKS

    A. Incorrect Analysis

- **To be handled by running code on multiple datasets**
- **To add additional predictors/variables to enhance the prediction of price**

IV. CONSTRAINTS

    A. Do Not Use the Personal Information of the consumer
- **Avoid Name,Income, Occupation,Location of residence**

    B. Data Collection
- **Collect Vehicle information only from the link mentioned**

V. ASSUMPTION

    A. Website has correct information with no missing values

VI. TIMELINE

    1. **Data Scraping: 3/23/2023**
    2. **Data Cleaning: 3/23/2023**
    3. **Data Visualizations: 3/23/2023**
    4. **Multiple Regression: 3/24/2023**
    5. **Documentation: 3/23/2023**

VII. REQUIREMENT DETAILS:

- **Web scraping to be done using Selenium and web browser to be used is chrome of any version.**
- **Use 30second delay to let the website load**
- **Use beblow packages only:**
  - a. **selenium**
  - b. **Import json**
  - c. **import pprint**
  - d. **import time**
  - e. **import re**
  - f.

- **Remove Null Values**
- **Create below columns using ms Excel functions**

Structure :

	A	B	C	D	E	F	G	H	I	J	K
1	price	colour	car_type	year	trim	mileage	wheels	Interior_Color	Interior_Type	location	

Sample data post cleaning:

price	colour	car_type	year	trim	mileage	wheels	Interior_Color	Interior_Type	location
47000	Black	Model_S	2018	75D_All-Wheel_Drive	56752	19	Black	Textile	Lathrop,_CA
52100	Silver	Model_S	2019	75D_All-Wheel_Drive	26360	19	Black	Premium	Lathrop,_CA
59800	Black	Model_S	2018	100D_Long_Range_All-Whe	31803	19	Black	Premium	Lathrop,_CA
62100	Silver	Model_S	2019	100D_Long_Range_All-Whe	24562	19	Black	Premium	Lathrop,_CA

- **For Multiple Regression Use Below Packages:**

  - g. **Pathlib**
  - h. **Pandas**

      i.   **Numpy**
      j.   **Sklearn**
      k.   **Dmba**
- **Utilize only below Parameters in Multiple Regression:**

A	B	C	D	E	F	G	
price	colour	car_type	year	trim	mileage	wheels	Interior_Type

      a.   **Run Exhaustive Search**
      b.   **Run Backward Search**
      c.   **Display All predicted values and actual Values**
      d.   **Run Accuracy Measures**
      e.   **Display Histogram of residuals**
- **For Tableau Visualizations display the below sheets:**
      a.   **Crosstable of Car Model vs Location with price**
      b.   **Scatterplot to show the relationship between Price and mileage**
      c.   **Line chart of Age vs Price**
      d.   **Chart to show year, color and count of cars available**
      e.   **Bar chart to show the number of available models**
      f.   **Crosstable chart to show trim of car vs location.Display available units**
      g.   **Create a Dashboard with a Crosstable chart to show trim of car vs location, a Chart to show the year, color, and count of cars available and a Scatterplot to show the relationship between Price and mileage. Apply Filters of car model and year on the entire dashboard.**
      h.   **Ensure all Sheets show additional car information by hovering for additional parameters on the car.**

IX.CHANGE REQUEST DETAILS:
    1.
    2.

X.DOCUMENT CREATION DATE: 3/24/2023