Evaluation Task

Background

Part of Sylndr's business is to acquire used cars. For Sylndr to be able to efficiently acquire used cars from consumers, Sylndr needs to accurately and quickly offer an appropriate acquisition price to the car's owner. This price needs to be up to date with the market prices to be attractive to the owner but not above market rate to allow Sylndr to make an acceptable margin.

Objective

The objective of this assesment is to guage the candidate's apptitude to help Sylndr's business using data modeling and statistics. You will be given data that contains a large number of "Nissan" cars with their associated features and market asking price. please submit the following deliverables in the expected timeframe of 1 Week starting from the time of receiving this task.

Deliverable 1: Data Cleaning

The data you received contains some noise and cars with outlying prices. Please, implement a method to exclude as many outliers as you can.

What to submit for Deliverable 1:

- a Jupyter notebook with runnable code and clear explanation of the approach you took to clean the data of outliers.

Deliverable 2: Exploratory Analysis

What insights can you gain about the market for "Nissan" cars given the data you received? Suggest a set of KPI's through which Sylndr can stay up to date with the market of "Nissan" cars.

What to submit for Deliverable 2:

- A Jupyter notebook with runnable code conatins your insights
- A report with your analysis, written in a way that's understandable for a business (non-technical) person. Recommend a set of KPIs to track the market in your report and describe how to calculate them.

Deliverable 3: Modeling

Describe in detail how you would design an approach to predict today's market asking price for a Nissan car given its features.

You are not expected to deliver a production ready model by any means. We need to understand how you will approach this problem and what research you will conduct.

Please build a proof of concept model with your devised approach. Please evaluate the model thoroughly.

We are going to evaluate your approach, problem solving and model evaluation steps. We are not going to evaluate you based on the accuracy of your model's predictions.

What to submit for Deliverable 3:

- A Jupyter notebook with runnable code containing any experiments you ran and your evaluation of them.

Note about your Submissions:

- please submit a requirements.txt file with your code.
- please document your code as much as possibles