Usecase 4.3

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So we defined data science as: It's the process of asking interesting questions, and then answering those questions using data.

For any **Data project** we will go through these steps:

1. Defining the Problem Statement
2. Collecting Data
3. Data Quality Checking and Remediation
4. Exploratory Data Analysis
5. Building Machine Learning Models
6. Model Evaluation
7. Communicating Results
8. Model Deployment
9. Model Performance Maintenance in Production

Usecase 4.3

Step 1: Defining the Problem Statement

- The first phase of our project, we gained insights into the used car market in Saudi Arabia, uncovering key aspects such as:
  - [x] ~~The region within Saudi Arabia that holds the largest share of the used car market.~~
  - [x] ~~The most frequently listed car brand for sale within the observed timeframe.~~
  - [x] ~~The car features that have the most substantial impact on a used car's price.~~
  - [x] ~~The typical price range for used vehicles around four years of age.~~

- In the 2nd phase:
  - [x] ~~We developed a predictive model for used car prices~~

- In the 3rd phase:
  - [x] ~~We developed a predictive model for used car prices~~ **~~category~~**

- For the 4th phase, our aim is to refine the categorization process employed in the third stage. We intend to achieve this by conducting an in-depth examination of the characteristics of car data.

Step 2: Collecting Data

Used cars data is collected from scrapping online website called Sayarah for selling cars in 2023 and posted in kaggle

Step 3: Data Quality Checking and Remediation

Done in the notebook

Step 4: Exploratory Data Analysis

Done in the notebook

Step 5: Building Machine Learning Models
To do in the notebook.
Step 6: Model Evaluation
To do in the notebook
Step 7: Communicating Results
To do in the notebook
Step 8: Model Deployment
To do in the notebook
Step 9 : Model Performance Maintenance in Production
Not applicable