

# Usecase 4.4

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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
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# Usecase 4.4

## 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:
  - ✓ ~~The region within Saudi Arabia that holds the largest share of the used car market.~~
  - ✓ ~~The most frequently listed car brand for sale within the observed timeframe.~~
  - ✓ ~~The car features that have the most substantial impact on a used car's price.~~
  - ✓ ~~The typical price range for used vehicles around four years of age.~~
- In the 2nd phase:
  - ✓ ~~We developed a predictive model for used car prices~~
- In the 3rd phase:
  - ✓ ~~We developed a predictive model for used car prices~~ **category**
- In the 4th phase:
  - ✓ ~~We refined 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.~~
- In this phase, our goal is to analyze the prices of used cars this year.

## Step 2: Collecting Data

Please consider using web scraping method to extract the needed data from the online website [Sayarah](#).

## 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