

Case Study Project – Used Car Sales

We have included a [sample solution](#) at the end of this document. Check it out to see what a passing solution to this case study looks like.

This document provides all the details you need to complete the case study. We recommend you read this document carefully before you get started.

Company Background

Discount Motors is a used car dealership in the UK. Since the announcement that all cars will need to be electric by 2030, the dealership believes that the way people are buying used cars is changing.

The head of marketing has decided to investigate the used car sales records last year. To come up with a comprehensive marketing plan for next year.

Customer Question

The marketing team would like you to answer the following questions to help:

- Are there differences in the fuel types between best and least selling used cars?
- Are there common features among the least selling used cars?

Dataset

You can download the data from [here](#). You can use any tools that you wish to analyze the data and create your presentation. The dataset has the following columns:

Column Name	Details
model	Character, the model of the car, 18 possible values
year	Numeric, year of manufacture from 1998 to 2020
price	Numeric, listed value of the car in GBP
transmission	Character, one of "Manual", "Automatic", "Semi-Auto" or "Other"
mileage	Numeric, listed mileage of the car at time of sale
fuelType	Character, one of "Petrol", "Hybrid", "Diesel" or "Other"
tax	Numeric, road tax in GBP. Calculated based on CO2 emissions or a fixed price depending on the age of the car.

mpg	Numeric, miles per gallon as reported by manufacturer
engineSize	Numeric, listed engine size, one of 16 possible values

Submission Requirements

1. You are going to deliver an oral presentation to summarize the analysis you have performed and your findings. You should prepare up to 8 slides to present to the non-technical customer. The task list below describes what they expect to see in the presentation.
2. You can use any tools you want to do your analysis and create visualizations.
3. You must use the data we provide for the analysis.
4. Your presentation must be no longer than 10 minutes.

Task List – Oral Presentation

Your presentation must be no longer than 8 slides plus a title slide. You should not present for longer than 10 minutes.

Your presentation should be targetted at the non-technical customer who requested the work you have completed.

The presentation should include:

- An overview of the project and business goals
- Your key findings including visualizations to support those findings
- An overview of how your findings answer the customer questions
- Your recommendations to the business for future work

Grading

Before delivering your oral presentation, remember to check your work against the following grading criteria. You must pass all criteria to pass this part of the certification.

Domain	Description	Sufficient	Insufficient
Data Visualization	Create data visualizations to demonstrate the characteristics of data and represent	Has created at least two different types of data visualization that highlight characteristics of	Has used the same visualization throughout. Has not included graphics to represent

	relationships between features.	<p>variables after validation.</p> <p>Has created at least one visualization that shows the relationship between two variables.</p> <p>Has used visualizations that support the findings being presented.</p>	<p>single variables and relationships.</p> <p>Has not used visualizations that support the findings being presented.</p>
Business Focus	Collects relevant information, detects patterns, observes and interprets data	<p>Has described at least one of the business goals of the project</p> <p>Has explained how their work has addressed the business problem</p> <p>Has provided at least one recommendation for future action to be taken based on the outcome of the work done</p>	<p>Has not identified any business goals</p> <p>Has not explained how their work has addressed the business problem</p> <p>Has not provided any recommendations for future actions</p>
Communication	Employs multiple tactics (written and verbal) to communicate to business leaders	Has delivered a verbal presentation addressing the business goals, outcomes and recommendations	Has not delivered a verbal presentation or delivers a presentation that does not mention the goals, outcomes or recommendations.

Sample Solution

You can find a sample solution from a recording [here](#). The sample solution demonstrates the required format for the final submission (i.e. a recording, you will use in-house tool to record your presentation), and sufficient content needs to be included against the grading rubric. However, the sample solution is not the only solution.