

Car Data Analysis

The owner of a car showroom handles a variety of car types and models. This dataset includes a range of features for each car, corresponding to the models present in the showroom. The price of each car is determined by its unique attributes. Our objective is to examine these various car features and understand how they influence the car's pricing.

Dataset: [CarFeatures.csv](#)

Q1. Perform EDA on the given dataset.

Q2. Summarize the data using descriptive statistics.

Q3. Identify the costliest car and the cheapest car by average price.

Q4. Which fuel type car has the highest average price?

Q5. For the given dataset, construct the following contingency table (take "make" as row variable)

Q6. What is the probability that a randomly selected car will be a BMW?

Q7. What is the probability that a randomly selected car will be an Audi?

Q8. Form the null and alternate hypothesis to test whether the price of Gas cars is significantly different from that of Diesel Cars

Q9. Form the null and alternate hypothesis and find the p-value. At 0.05 level of significance, is the price of gas cars significantly different from that of diesel cars?

Q10. Suppose you randomly select a car from this dataset. What is the probability that it is a 'Luxury Car' ?
(consider BMW, Mercedes and Audi as a luxury car under the column Make)

Q11. You want to select a subset of three unique cars from the dataset to participate in a race. How many different ways can you arrange the cars in the race, considering their 'Make' as the criteria?

Q12. If you randomly pick a car with 8 cylinders, what is the probability that BMW?

Q13. You are conducting a random survey by selecting 7 cars from the dataset. Calculate the probability that exactly 3 out of the 7 selected cars have 'Turbo' aspiration.