Car Price Prediction Analysis Report

Dataset Description

The dataset contains information about vehicles including brand, model, year, mileage, engine size, fuel type, and price. All fields appear to be complete with no missing values or duplicates. Descriptive statistics show a mean vehicle year of 2018.75, average mileage of 68,750, and average price of $25,000.

Key Insights from Analysis

The visualizations reveal that this is a small but diverse dataset of 8 cars with BMW being the most represented brand. The price range is substantial ($14,000 difference between cheapest and most expensive), and there's an even split between diesel and petrol vehicles. The correlation visualization shows how factors like mileage, age, and engine size relate to price.

Model Results

Two regression models were trained: LinearRegression and RandomForestRegressor. The RandomForestRegressor outperformed LinearRegression significantly, achieving an MSE of 6,606,850 compared to LinearRegression's MSE of 15,089,333. With only 8 data points, the model's predictive power may be limited.