**Table of Content**

Project Background

Exploratory Data Analysis (EDA)

Visualising the data

Findings:

Analysis:

Conclusion:

**Project Background**

This report seeks to identify the preferred vehicle for users from a selection of three vehicles, with a bid to identify lags the manufacturers need to work on and in turn improve customer acceptability and sales. The dataset focused on data from customer reviews from consumeraffairs.com on three vehicles; Toyota Camry, Chevrolet and Mitsubishi.

**Exploratory Data Analysis (EDA)**

Customer review was from a cross section of customers spanning the years 2001 till 2022. The data was pulled for each vehicle type then merged into a frame. Scraped data included, Date, Review text and Ratings awarded to the vehicle. Data had quite a bit of missing values for ratings and made data analysis a tough one.

The resulting data frame after merging consisted of 810 rows and 3 columns and null data was identified with NAN. A column was then added to the dataframe to include car type and identify what vehicle a review referred to. A quick glance through the dataframe viewing the head and tail showed that there were quite a bit of missing ratings at the end which were primarily for Mitsubishi vehicles.

**Visualising the data**:

Was done using pivot tables on Google sheets focusing on customer preferences indicated by the ratings they awarded their vehicle type. A pie chart and column chart was used to identify these.

**Findings**

It was determined that while Toyota Camry had received more ratings from customers with a total of 296 reviews, it had the 2nd highest 5 star ratings of 57 and the highest 1 star rating, Chevrolet had the 2nd highest total number of ratings of 237 awarded by customers, it received the highest 5 star rating from the customer with 86 and lowest 1 star rating of 83, based on the available number of customer rating. Mitsubushi lagged with a total number of reviews of 135, consisting of 20 5 star ratings and 96 1 star ratings.

**Analysis**

From the EDA it can be inferred that the preferred vehicle of choice among the three vehicles in the data set would be the Chevrolet as it received the highest 5 star rating amongst the three.. It can also be determined through text reviews touched on repair issues, paint jobs, car performance and accident cases among others. There appeared to be quite a number of negative reviews for the cars in review.

**Call to Action**

Car manufacturers for the cars in review; Toyota Camry, Chevrolet and Mitsubishi are advised to look into the customer reviews and work on improving areas where the customers have made complaints. This would improve customer satisfaction and in the long run improve sales.