SQL and Databases:

Project Report
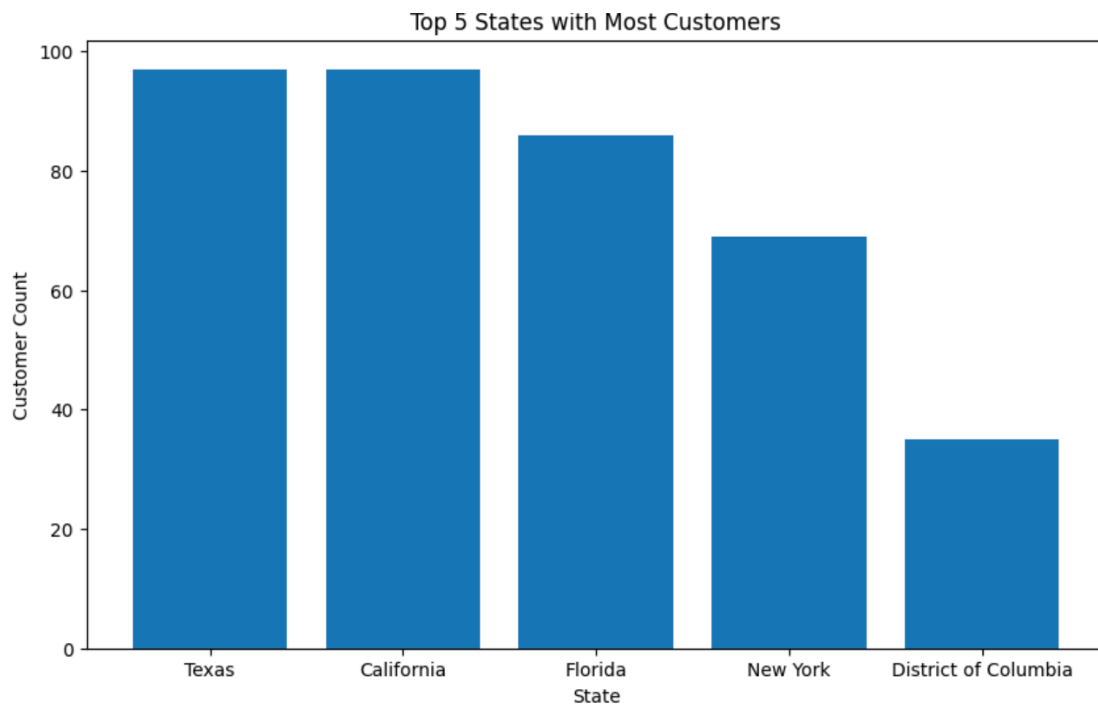
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Business Overview

Total Revenue	Total Orders	Total Customers	Average Rating
$54,743,925	1,000	279	3.32

Last Quarter Revenue	Last Quarter Orders	Avg Days to Ship	% Good Feedback
$8,573,149	199	105.53	20.05%

Customer Metrics

Distribution of Customers across States

Observations / Findings

The distribution of customers across states has been analysed, and the top 5 states with the most customers are as follows:

1. Texas: 97 customers

2. California: 97 customers

3. Florida: 86 customers

4. New York: 69 customers

5. District of Columbia: 35 customers

Average Customer Ratings by Quarter

Average Rating in Each Quarter
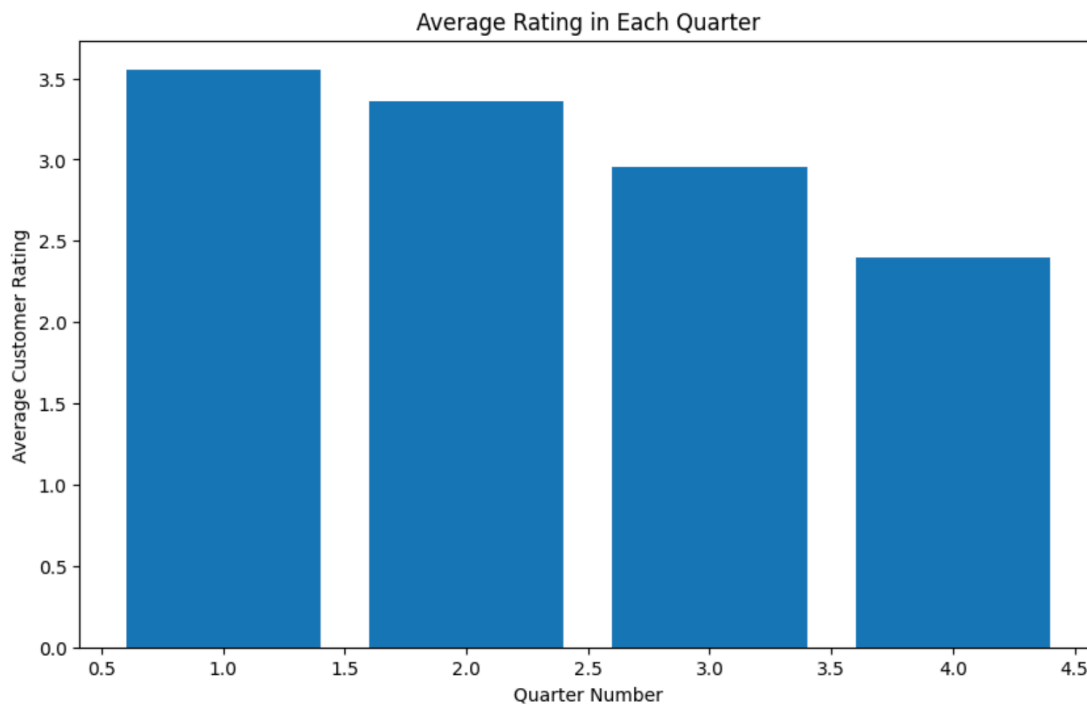
Summary and Findings:

The analysis of average customer ratings in each quarter reveals the following insights:

1. Quarter 1 (Q1):Average Rating: 3.55
2. Quarter 2 (Q2):Average Rating: 3.36
3. Quarter 3 (Q3):Average Rating: 2.96
4. Quarter 4 (Q4):Average Rating: 2.40

From Q1 to Q4, the average customer rating gradually decreased.
Starting with the highest average rating of 3.55, Q1's customer feedback is typically positive.
The average rating shows a discernible decline in the following quarters, with Q4 recording the lowest average rating (2.40).
Over the examined quarters, there may have been a drop in consumer satisfaction, as indicated by the downward trend.

Trend of Customer Satisfaction

Percentage Distribution of Customer Feedback by Quarter

Summary and Findings:

Quarter 1:

Very Bad: 10.97%

Bad: 11.29%

Okay: 19.03%

Good: 28.71%

Very Good: 30.00%

Quarter 2:

Very Bad: 14.89%

Bad: 14.12%

Okay: 20.23%

Good: 22.14%

Very Good: 28.63%

Quarter 3:

Very Bad: 17.90%

Bad: 22.71%

Okay: 21.83%

Good: 20.96%

Very Good: 16.59%

Quarter 4:

Very Bad: 30.65%

Bad: 29.15%

Okay: 20.10%

Good: 10.05%

Very Good: 10.05%

Periodic Distribution

The first quarter's consumer feedback is evenly split across several categories, with a greater proportion of positive and extremely positive comments.

The percentages of very bad and terrible feedback have slightly increased in the second quarter, while the percentages of good and very good feedback have decreased.

Overall satisfaction declines in the third quarter due to a notable rise in very bad and bad ratings.

The fourth quarter saw a significant rise in really bad and bad feedback, maintaining the upward trend in unhappiness.

General Trend

Throughout the quarters, there is a discernible trend of growing discontent, particularly in the third and fourth quarters.

A decrease in customer satisfaction is shown by an increase in the percentage of really bad and bad feedback.

Top Vehicle makers preferred by customers
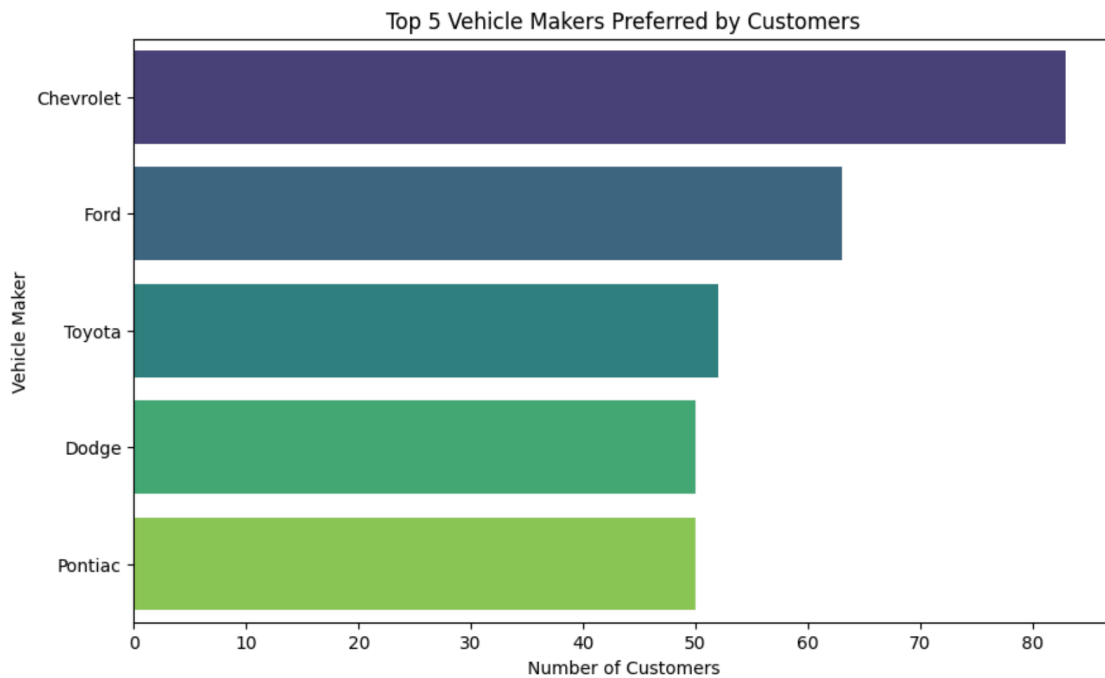
Summary and Findings:

Top 5 Automakers Selected by Consumers:

With 83 consumers, Chevrolet is the most popular automaker.

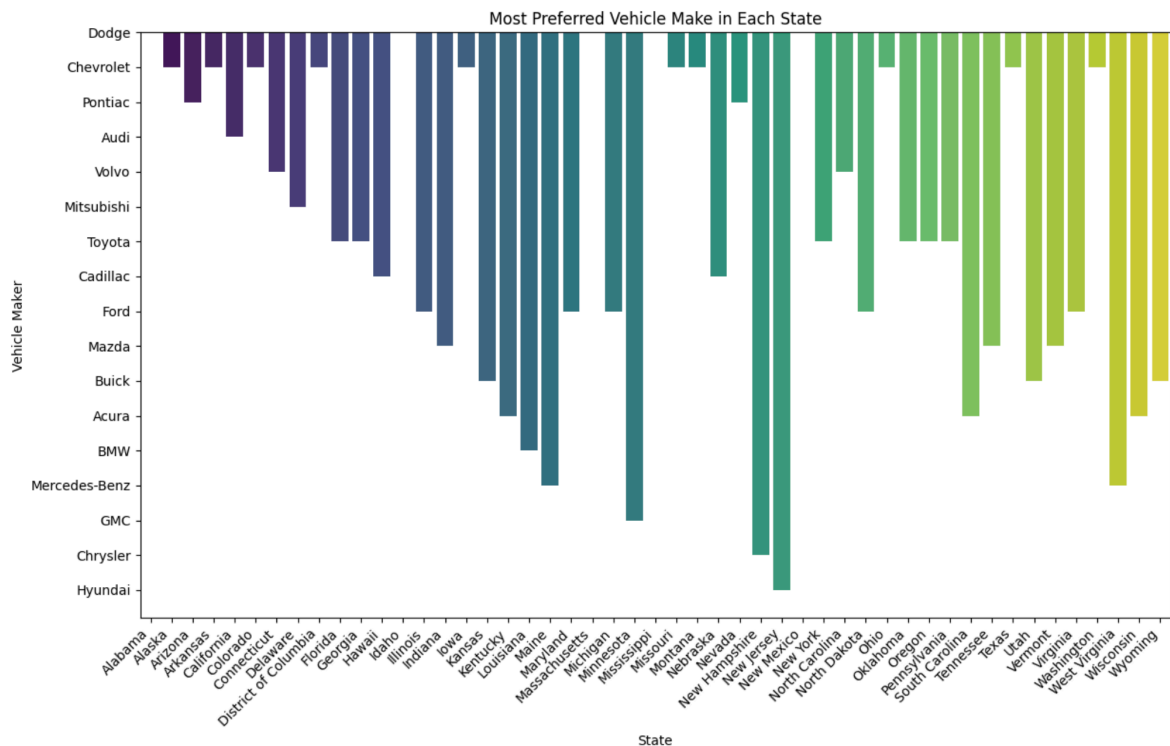The next best options are Pontiac, Ford, Toyota, and Dodge.

The number of customers fluctuates, suggesting that certain car manufacturers are more or less popular.

In brief:

Customers clearly favor Chevrolet as the top option, demonstrating their steadfast devotion to this brand.

Large client bases for Ford, Toyota, Dodge, and Pontiac also indicate a wide range of customer preferences.

Most preferred vehicle make in each state

Summary and Findings:

Preferences by Region:

In many states, preferences lean toward Chevrolet.

Niche markets exist for luxury brands such as Audi, Cadillac, Mercedes-Benz, and BMW.

Popularity of Brands:

Dodge, Toyota, Buick, and Acura are well-represented in the market.

Every state regularly enjoys Toyota's popularity.

Potential Market:

Planning for inventories and marketing tactics is guided by an understanding of state-specific preferences.

Localized marketing campaigns can increase revenue and brand awareness.

Effect on Auto Dealerships:

Dealerships can customize their offerings according to the most well-liked local brands.

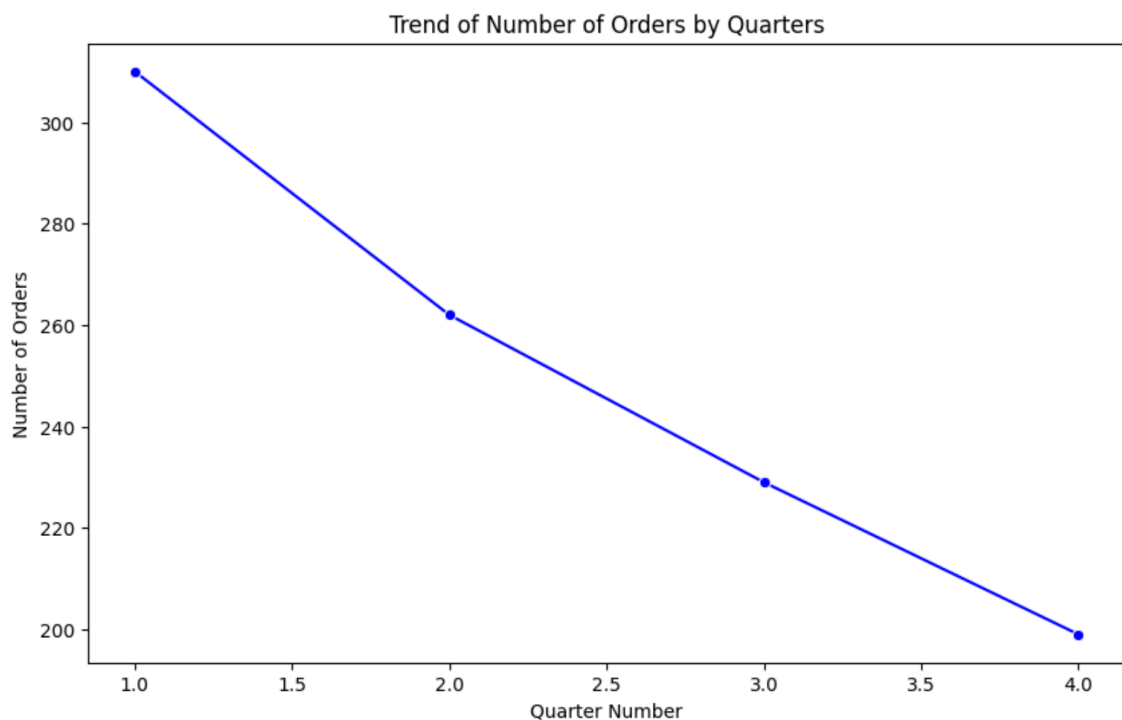Prioritize high-end models in states where luxury brands are preferred.

Customer-First Strategy:

It's critical to modify marketing and production to suit local tastes.

Sales and happiness can be increased by making strategic decisions based on localized insights.

Revenue Metrics

Trend of purchases by Quarter

Trend of Number of Orders by Quarters

Summary and Findings:

Over the four quarters, the trend in the number of orders shows a progressive reduction.

With 310 orders, the first quarter had the most, indicating a good start for the company.

In the following quarters, there is a discernible drop in the quantity of orders, suggesting a possible variation in client demand or other outside variables.

Out of all the four quarters, Quarter 4 had the fewest orders, indicating a potential seasonal trend or a decline in overall business activity.

The first quarter of the business's existence saw a peak in the number of orders, which was steadily declining in the following quarters. Further research into the variables affecting consumer behavior, market dynamics, or outside events that affect order volume may be necessary in light of this pattern. Making wise judgments to maximize corporate strategy and adjust to shifting market conditions can be aided by an understanding of these patterns.

Quarter on Quarter % change in Revenue

Trend of Revenue and Orders by Quarters

Summary and Findings:

Overall Revenue Trend:

Over the course of the quarters, there has been a decline in total revenue. Revenue is highest in Quarter 1, and then it noticeably declines in Quarters 2, 3, and 4. This suggests that in order to increase income in the upcoming quarters, strategic alterations might be required.

Order Volume Trend:

Over the course of the quarters, there is a corresponding decline in the quantity of orders. The pattern of declining revenue is consistent with the decline in the number of orders. Developing focused solutions might be aided by having a thorough understanding of the variables behind this order reduction.

Shipping Metrics

Average discount offered by Credit Card type

Average Discount for Different Types of Credit Cards
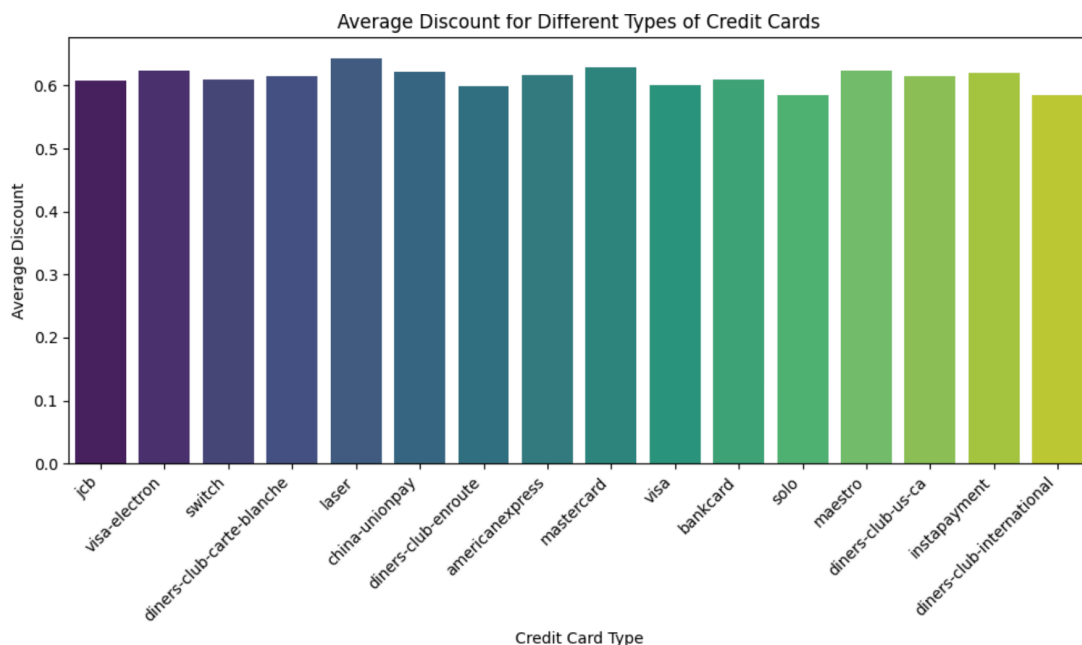
Summary and Findings:

Average Rebates:

The typical discount varies depending on the kind of credit card.

'Laser' is the credit card type with the highest average discount, closely followed by 'Mastercard' and 'Maestro.' 'Diners-club-international' has the lowest average discount of all the credit card types looked at.

Changeability:

Average discounts show some variability, suggesting that clients with various credit card types receive varying discount rates.
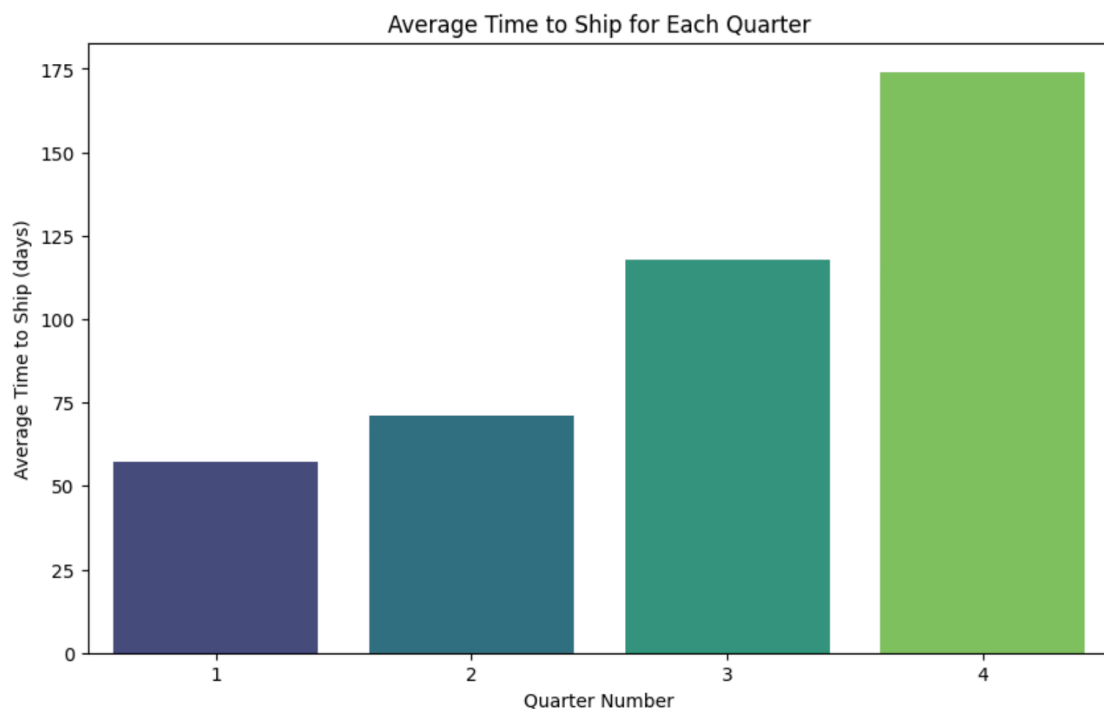
Observations:

'Laser' and 'Mastercard' holders typically get comparatively larger discounts.

In contrast to other card categories, holders of "diners-club-international" and "solo" cards typically receive less average discounts.

The typical discounts fall into the range of about 0.58 and 0.64.

Time taken to ship orders by Quarter

Average Time to Ship for Each Quarter

Summary and Findings:

First quarter (Q1):

With an average ship time of roughly 57 days, the first quarter has the lowest average ship time of all.

This means that orders should be processed and shipped quickly in the first quarter.

Second quarter (Q2)

Comparing Quarter 2 to Quarter 1, the average ship time increased by about 71 days.

Increased order volumes or other operational variables could be the cause of the increase.

Third Quarter (Q3):

With an average delivery time of almost 118 days in the third quarter, this suggests that processing times have increased even further.

An considerable increase in the average ship time can indicate that fulfillment or logistics issues need to be investigated more thoroughly.

Fourth quarter (Q4):

At almost 174 days, the average ship time for the fourth quarter is the highest.

Concerns regarding the effectiveness of order fulfillment in the last quarter are raised by this significant increase.

Effect on Business:

Customer satisfaction may be adversely affected by the significant increase in average ship time in Q4.

To improve the client experience, businesses must deal with any shipping process bottlenecks or delays.

Insights and Recommendations

Distribution of Customers by State:

Analysis: The states with the largest client counts are Texas and California, suggesting a considerable market presence.

Opportunities for focused marketing may arise from a concentrated consumer base in particular states.

Suggestions:

Use data from states with a high client count to inform customized marketing plans.

Average Star Rating for Every Quarter:

Conclusions: Despite a minor dip in subsequent quarters, ratings are still consistently high.

Most consumers give ratings in the range of "Okay" to "Very Good."

Suggestions: Keep an eye on feedback patterns to identify possible areas where customer satisfaction could be raised.

Trends in Customer Satisfaction:

Findings: The proportion of "Very Bad" reviews rises over the course of quarters, suggesting a drop in customer satisfaction.

Feedback that is consistently "Good" or "Very Good" is a good thing.

Suggestions: Deal with problems that cause unhappiness and concentrate on improving the general customer experience.

Top Favourite Automakers:

Findings: Customers' top selections are Ford, Toyota, and Chevrolet.

Preference car manufacturers' insights are useful for inventory planning.

Suggestions: Boost alliances or advertising campaigns for well-known automakers.

State-by-state Preferred Car Make:

State-specific preferences offer unique perspectives on regional market developments.

distinct states' customers have distinct tastes.

Suggestions:

Adjust marketing plans and inventory to suit local tastes.

Number of Orders by Quarter Trend:

Findings: A declining pattern in the quantity of orders throughout the course of the quarters.

Order patterns may be influenced by external events or seasonal variations.

Suggestions: Examine the variables causing the variations and modify company plans as necessary.

Change in Revenue Per Quarter Over Quarter:

Findings: A significant drop in sales in subsequent quarters suggests possible difficulties.The percentage change from quarter to quarter aids in trend identification.

Suggestions: Determine what is causing the revenue reduction, then take appropriate action.

Revenue and Order Trends by Quarter:

insights: A thorough summary is given by the visualisation of revenue and order trends.

Analysing revenue and order trends more closely facilitates strategic decision-making.

Suggestions: Make educated judgments about operations, marketing, and inventories by utilizing trends.

Average Savings on Various Credit Cards:

Findings: Average discounts vary depending on the kind of credit card.

Comprehending patterns of discounts facilitates financial planning.

Suggestions: Take into account credit card-specific offers depending on knowledge about discounts.

Average Shipment Time by Quarter:

Findings: There are notable differences in the average ship times between quarters.

Customer satisfaction may be impacted by longer ship delays during certain quarters.

Suggestions: Look into the causes of the delays and streamline the delivery procedure.

Business Recommendations

- Execute marketing campaigns that are specifically targeted.
- Take care of quality-related rating issues.
- Concentrate on your top 5 favourite automakers.
- Adapt tactics to local inclinations.
- Launch campaigns to buck the trend of dwindling order volume.
- Make the most of discounts and prices to increase sales.
- Strike advantageous credit card deals.
- Boost shipment productivity, especially in the fourth quarter.
- Develop a plan to increase order volumes and revenue.
- Use data analytics to make well-informed decisions.

End of Report