E-commerce Customer Behavior

By Adesina Omojola

INTRODUCTION

The evolution of e-commerce has revolutionized the way businesses engage with customers. In this digital landscape, understanding customer behavior becomes pivotal for sustained success.

The dataset encapsulates a myriad of customer-centric attributes, including demographic details, purchase behaviors, satisfaction indicators, and geographical insights. Each entry offers a glimpse into customers' diverse interactions while navigating the e-commerce platform.

OBJECTIVE

The primary objective is to unravel the intricate nuances of customer behavior, seeking insights that empower businesses to make informed decisions. By dissecting various facets of this dataset, I aim to extract valuable patterns and correlations to enhance the overall customer experience

METHODOLOGY

My methodology encompasses a multifaceted analysis, diving into customer segmentation, satisfaction assessment, promotion strategies, retention tactics, and geographical insights. By employing a data-driven approach, I aim to unlock actionable insights that can drive meaningful business decisions

DATA PREPARATION AND CLEANING

I choose to use SQL for my data cleaning and exploration process and after importing the CSV file into MySQL, I named the table "customer" to make it easier to work with in my analysis.

After a thorough review, I discovered that two roles had empty spaces in the Satisfaction Level column due to a lack of customer feedback. To enhance clarity, these empty spaces were replaced with 'N/A' (Not Applicable).

STATISTICS ANALYSIS

The analysis of customer behavior within the e-commerce realm is not merely an exercise in understanding preferences; it's a strategic imperative. It allows businesses to craft personalized experiences, refine marketing strategies, optimize retention efforts, and, ultimately, foster long-term relationships with customers.

KEY METRICS

- Total Customers
- Average Items Purchased
- Overall Average Rating
- Overall Total Spend
- Average Days Since Last Purchase
- Percentage of City Distribution
- Percentage of Gender Distribution
- Satisfaction & Retention Customers
- Membership Impact
- Discount Impact
- Top 10 Highest Average Rating Number Of Items Purchase
- Gender and Age Group Distribution
- Total Spend by Membership
- Top 5 Cities with Highest Number of Items Purchase
- Number of Customers by Time Interval

VISUALIZATION

I exported my clean CSV file to Tableau Public Desktop and I created a dashboard to display and communicate my findings for my visualization.

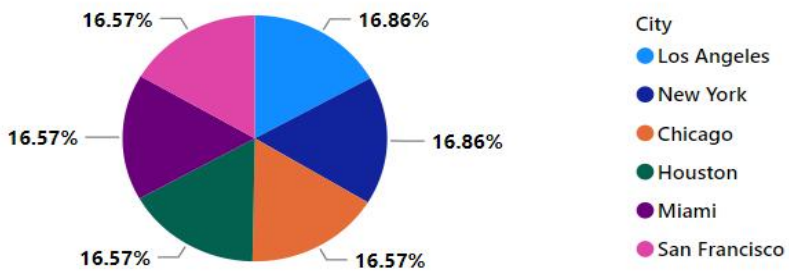
E-commerce Customer Behavior

Gender: All

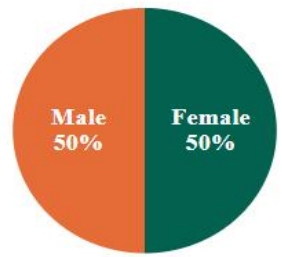
Location: All

350	12.60	4.02	295.88K	26.59
Total Customers	Avg Items Purchased	Overall Avg. Rating	Overall Total Spend	Avg. Days Since Last…

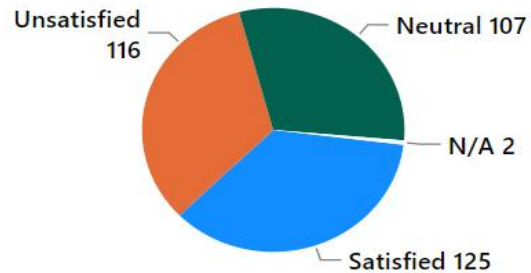
% of City Distribution



% of Gender Distribution

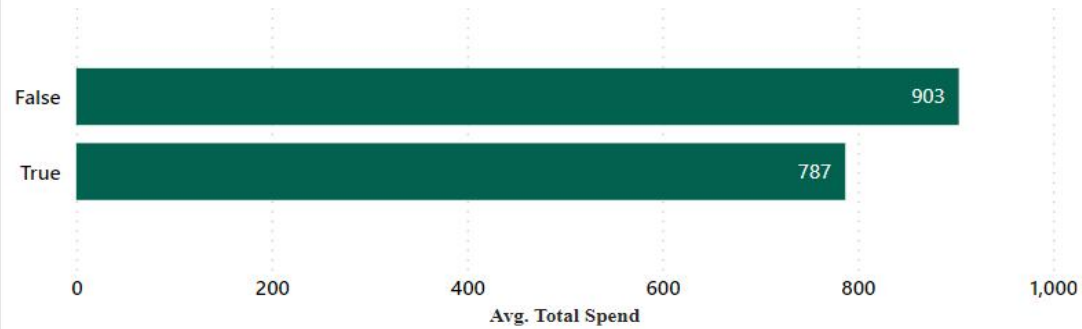


Satisfaction & Retention Customers



Membership Impact

Discount Impact



E-commerce Customer Behavior

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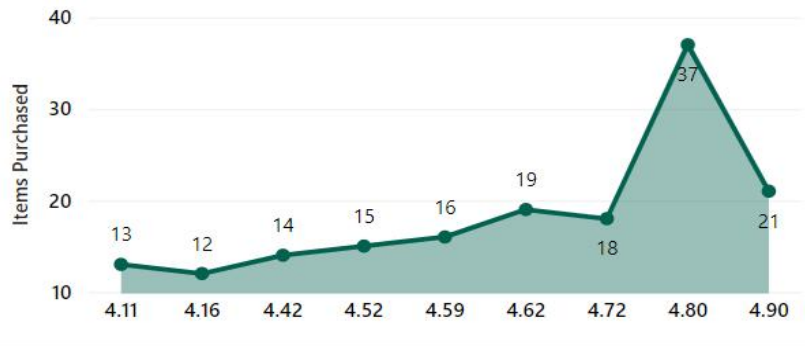
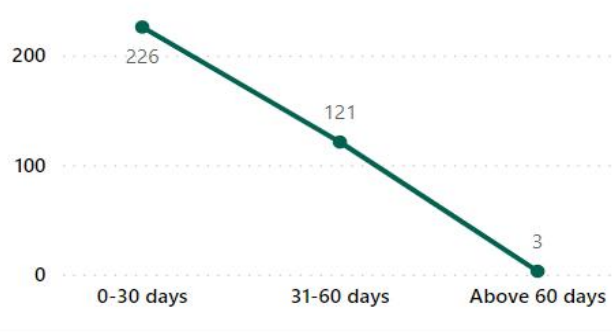
350	12.60	4.02	295.88K	26.59
Total Customers	Avg Items Purchased	Overall Avg. Rating	Overall Total Spend	Avg. Days Since Last…

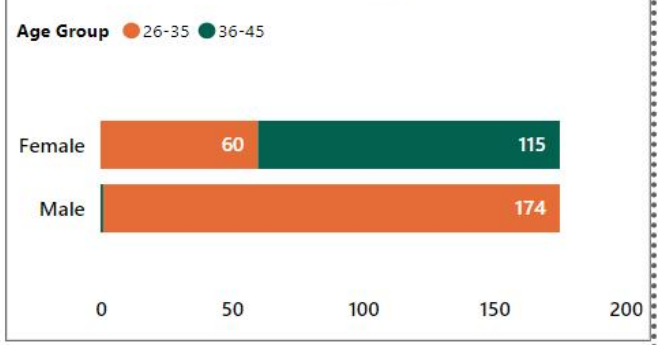
Top 10 Highest Avg. Rating No. of Items Purchased



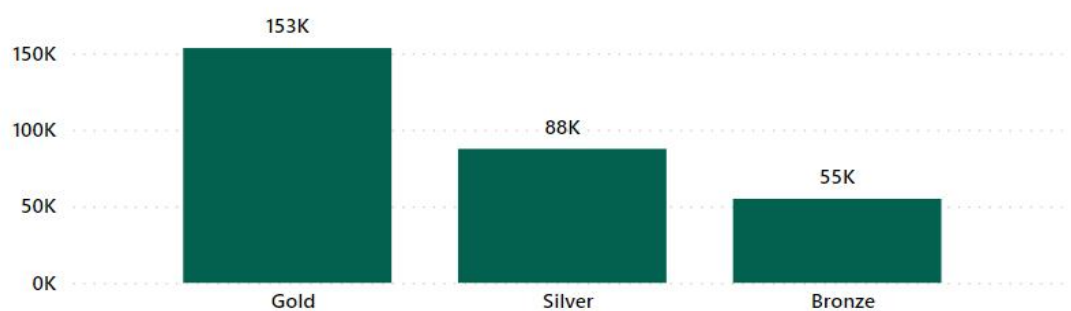
No. of Customer by Time Interval



Gender and Age Group Distribution

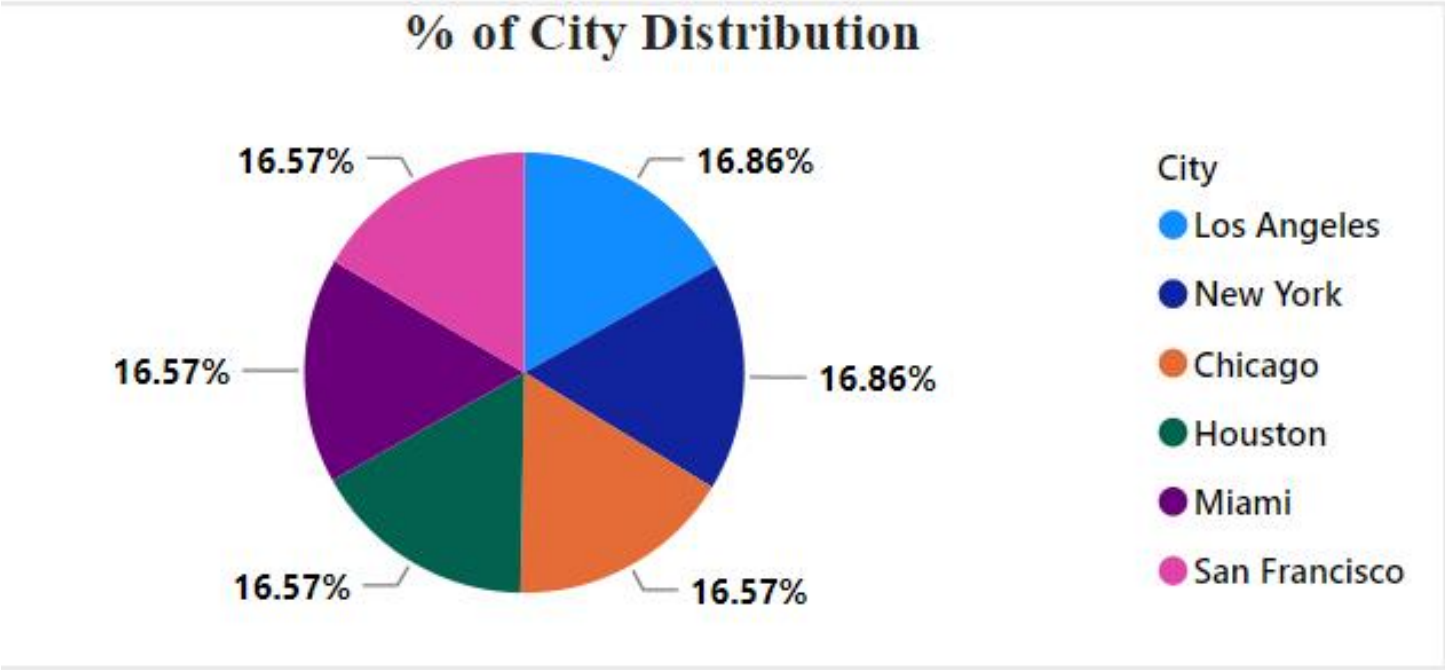


Total Spend by Membership



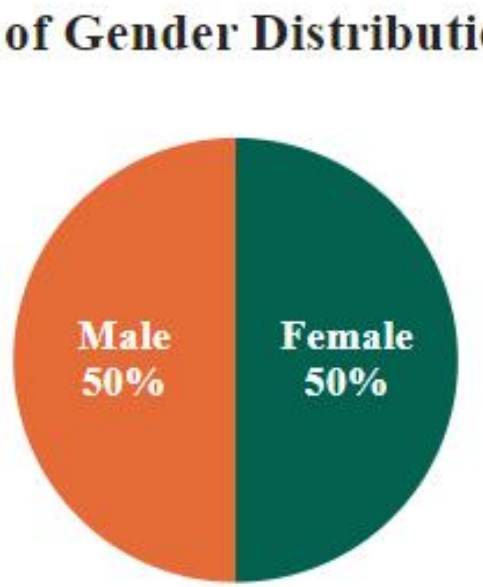
Top 5 Cities with Highest No. of Items Purchased

COMMUNICATION AND INSIGHTS



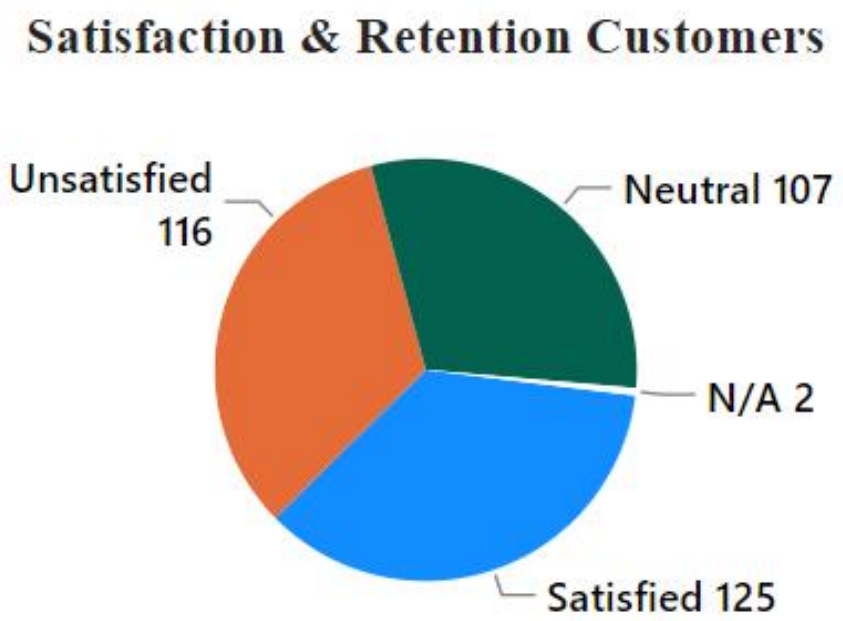
Percentage distribution of customers across different cities

The analysis reveals that Los Angeles and New York exhibit the highest percentage, standing at 16.86%, while all others closely follow at 16.57% each.



Proportional distribution of customers based of gender

The analysis indicates that there are 175 female customers, accounting for 50% of the total, while there are also 175 male customers, equally representing 50% of the total customer base.

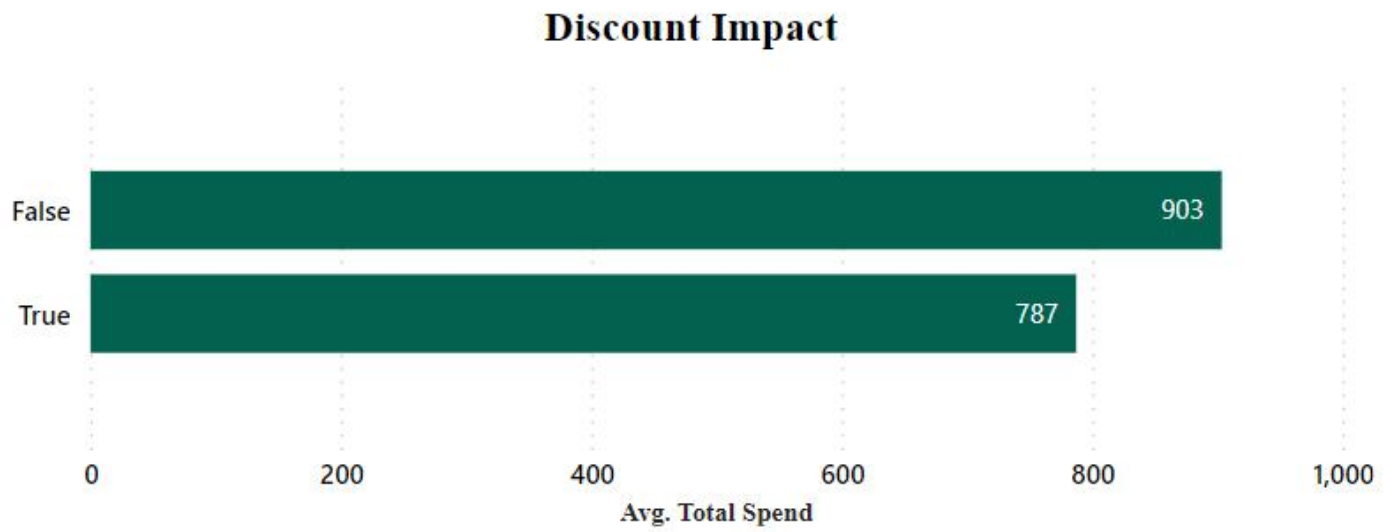


Identification and analysis of satisfied and retained customers and those who are not satisfied or haven't made recent purchases

The analysis demonstrates that the highest count of customers, totaling 125, exhibit satisfaction, while there are 116 customers categorized as unsatisfied.

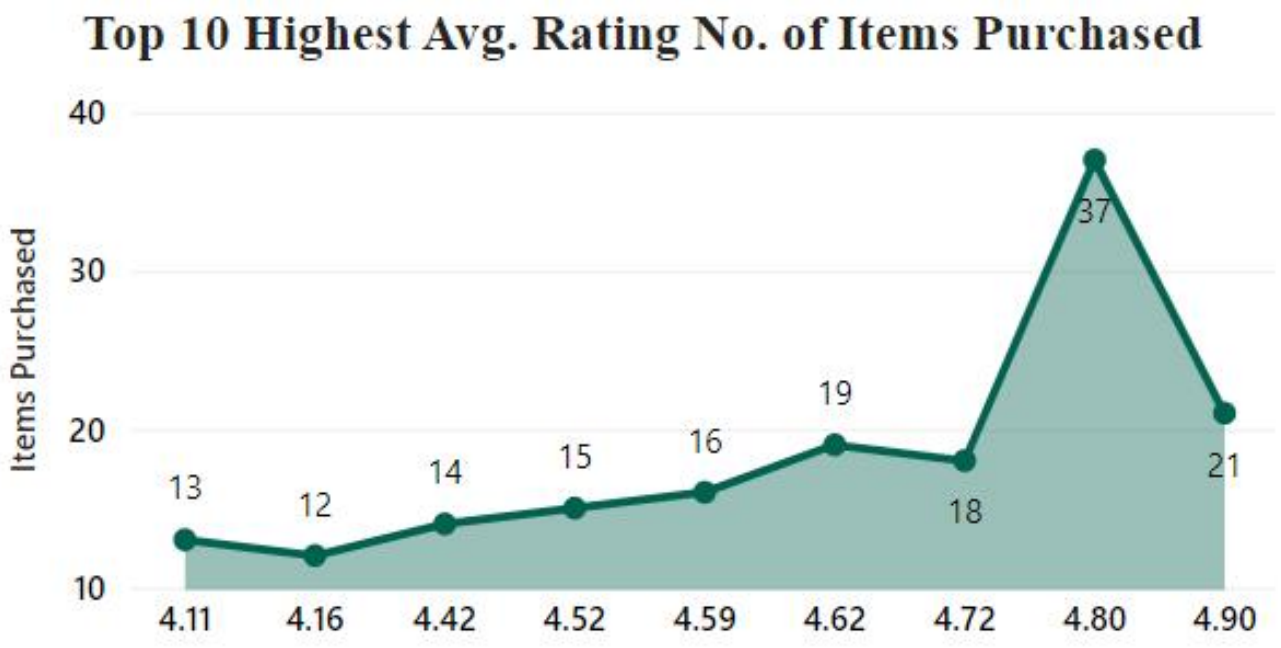
Understanding the influence of different membership tiers(Gold, Silver, Bronze) on customer behavior, spending, and satisfaction

The analysis reveals that among the Membership_Type categories, Gold membership comprises 117 customers and boasts the highest average rating at 4.68



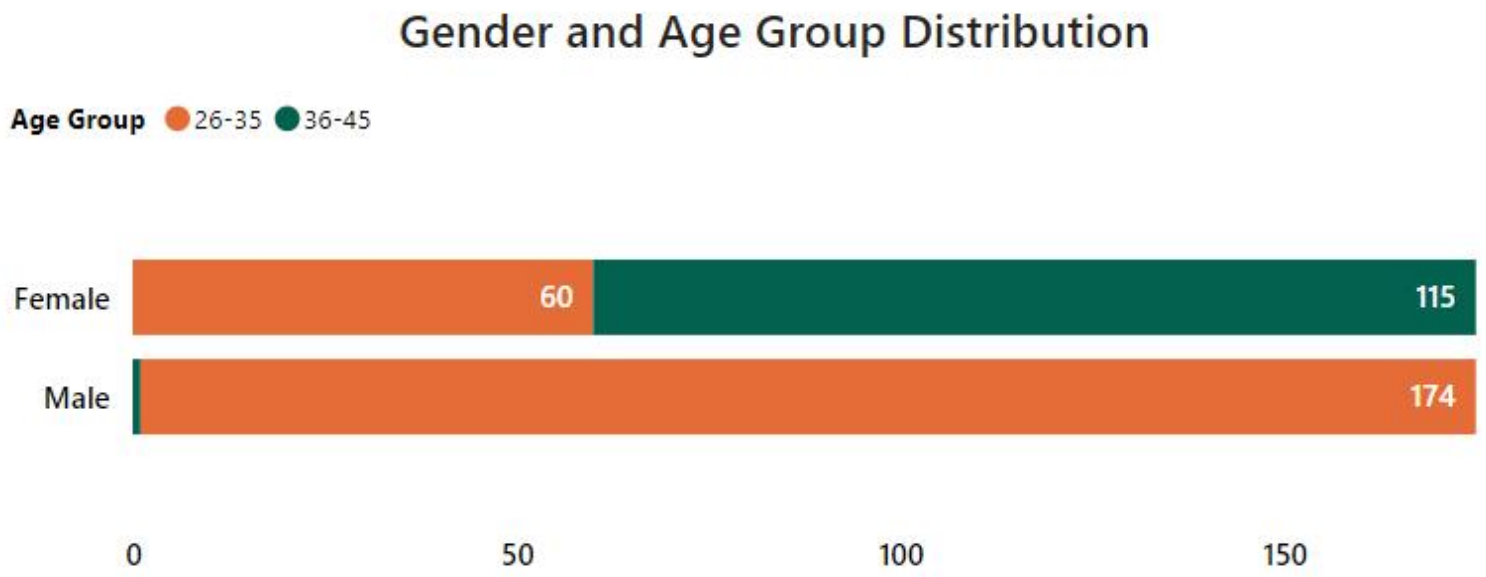
Analysis of how discounts affect customer spending behavior and satisfaction levels

The analysis indicates that customers categorized with 'Discount Applied' as False exhibit the highest average total spend, totaling 903.49, while those with 'Discount Applied' as True show an average spend of 787.27



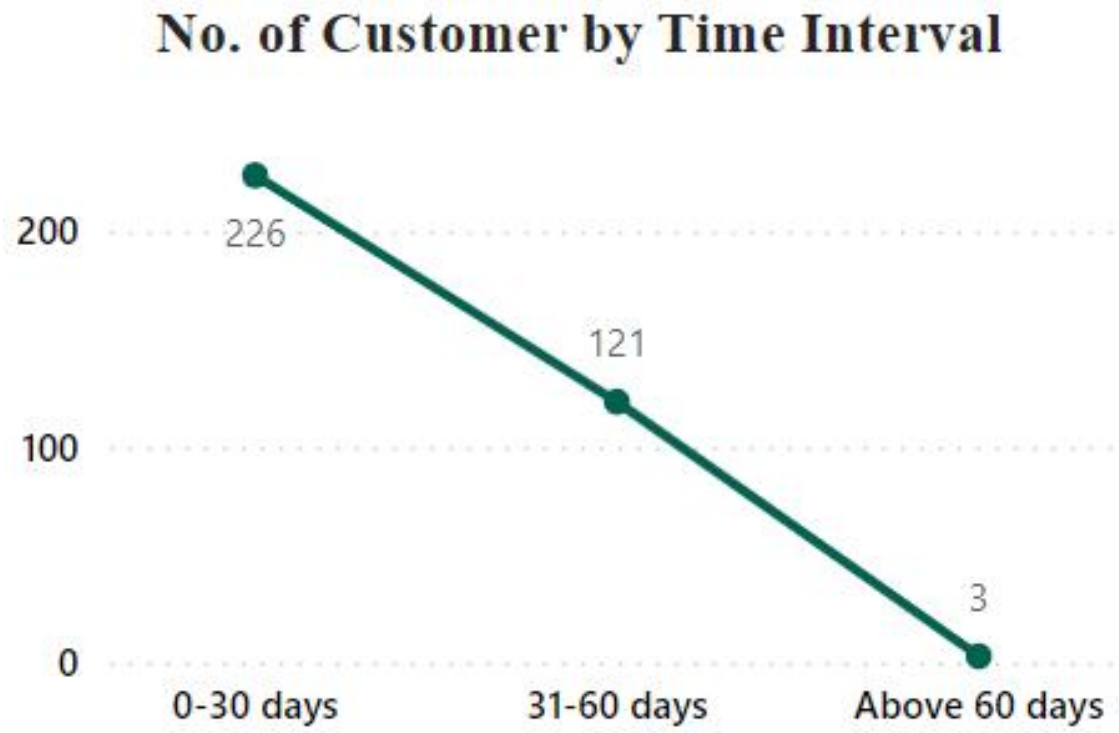
Identification of the top-rated items based on the average rating and the quantity of items purchased

The analysis highlights that items with a purchase count of 21 exhibit the highest average rating, reaching 4.9



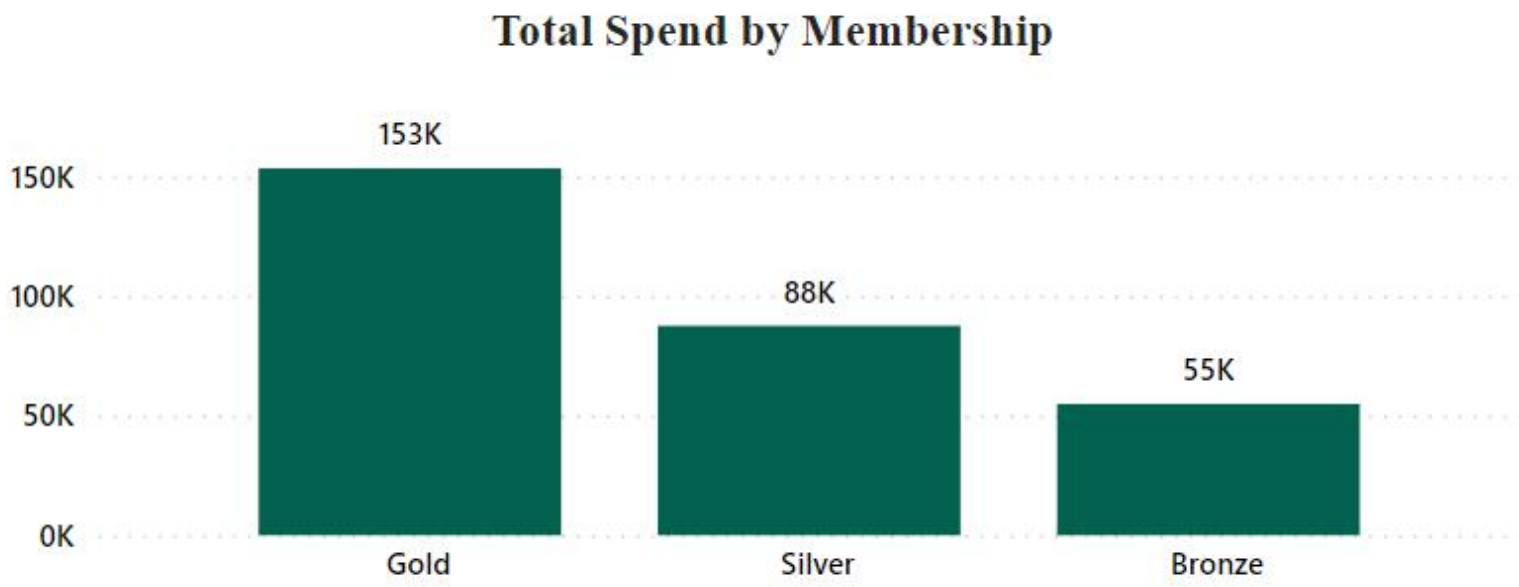
Segmentation and distribution of customers by gender and age groups to understand demographic patterns

The analysis indicates that the age group of 26-35 for males has the highest count of customers, totaling 174, whereas females aged between 36-45 follow closely with 115 customers



This graph indicating how many customers fall with specific time interval

The analysis indicates that the highest count of customers falls within the 0-30 days timeframe, totaling 226, while the count for customers above 60 days stands at a lower number



Total expenditure on the platform categorized by different membership types, indicating the spending behavior of each membership tier

The analysis reveals that among the membership types, Gold membership reflects the highest total spend, amounting to 153,403

Identification of the top 5 cities with the highest volume of items purchased, showcasing the most active regions in terms of purchasing

The analysis indicates that San Francisco records the highest total number of items purchased, reaching 1160

RECOMMENDATION

- Implement targeted retention campaigns, personalized offers, or loyal programs to encourage repeat purchases and engagement within the 0-30 days timeframe.
- Consider tailored promotions, new product launches, or re-engagement campaigns to bring back inactive customers and encourage their return.
- Use age group and gender insights to tailor marketing efforts. Craft specific campaigns or product offerings targeting their preferences and behaviors.
- Strengthen Gold membership benefits, exclusive offers to retain these high-value customers and potentially encourage migration from other tiers.
- Improve discount strategies by analyzing the difference in spend between customers who receive discounts and those who don’t, ensuring discounts encourage purchases effectively without compromising profitability.
- Invest more in cities showing high item purchases, understanding their preference and tailor marketing strategies.
- Regularly analyze trends, satisfaction levels, and spending patterns to adapt strategies promptly and maintain relevance in the market

Thank You