DATA ANALYSIS ON GOLD ZONE PLAYERS CLUB MEMBERSHIP

Introduction

The analysis of the Gold Zone Players Club membership data provides valuable insights into the spending patterns, game preferences, and demographics of the club's members. By examining 278 records containing key information such as member age, gender, job type, spending behavior, and visit frequency, this analysis offers a deeper understanding of member engagement. The goal is to identify trends and correlations that can drive marketing strategies and improve customer engagement. Through this data, we aim to uncover factors influencing spending and game selection, helping to shape targeted promotions and personalized experiences for club members.

Dataset Overview

The dataset includes the following columns:

- **memberID:** Unique identifier for each member.
- **age_start:** Age of the member when they joined.
- **dist_park:** Distance to the park in miles.
- **gender:** Gender of the member (Male/Female).
- **job_type:** Job type of the member (Salaried, Hourly, Unknown).
- **last_visit23:** Last visit date in 2023.
- **most_common_game:** The game most commonly played by the member.
- **total_games:** Total number of games played by the member.
- **total_spend:** Total amount spent by the member.
- **total_visits23:** Total visits in 2023.
- **passholder:** Indicates whether the member is a passholder.
- **years_member:** Number of years the member has been part of the club.

Data Quality Check

Upon reviewing the dataset, I found that it contains no missing or blank values, ensuring the data's integrity for analysis. I also performed a series of transformations:

- Converted the **last_visit23** column to a datetime type for easier date operations.
- Created a new column called **SuperPlayers**, which flags members who have spent over $5000 and visited the park 15 or more times.

Key Insights from The Data

Game Popularity Trends

A bar plot illustrating game preferences among visitors shows that **"Star Wars"** is the most popular game, followed by **"Connect 4 Hoops" and "Wheel Deal."** However, there is a significant drop in popularity for the remaining games, with "**Gone Fishin" and "Dance Dance Revolution"** ranking as the least popular choices. This distribution highlights the strong preference for a few select games while others receive minimal engagement. **(Appendix 2)**

Spending and game preference

I analyzed members' spending across different game categories. The game **"Dance Dance Revolution"** had a significantly higher average spend compared to other games, despite being less popular. This indicates that while fewer members engage with this game, they tend to spend more on average, likely due to longer or more expensive play sessions.
On the other hand, **"Gone Fishin"** was the least preferred game, both in terms of frequency and total spend, suggesting lower engagement levels.

Age And gender demographics by game

I grouped the data by game preference and gender to understand which demographics are most drawn to specific games. For example:

- Women generally prefer games like **"Dance Dance Revolution"** and **"Gone Fishin"**, with average ages around 30.
- Men are more likely to play games like **"Star Wars"** and **"Connect 4 Hoops"**, with a slightly younger average age of 26.

This analysis helps target promotions more effectively by aligning them with demographic trends.

Spending variability

I calculated the Coefficient of Variation (CV) for both total spending and visit frequency:

- The CV of total spend is **13.26%**, indicating relatively low variability in how much members spend.
- The CV of total visits is **27.94%**, reflecting higher variability in the number of visits members make.

This shows that while members' spending amounts are fairly consistent, their frequency of visits varies more significantly. **(Appendix 1)**
CV = (Standard Deviation / Mean) × 100

Spending behaviour

A clear concentration of members' total spending is observed between $4,000 and $6,000, indicating a common spending range among club members.**(Appendix 3)**

By Age

No relationship is there between age and total spend, this could be because spend capacity is not connected to age but to how much You have in your hand and how much You can spend. **(Appendix 4)**

by job type

An analysis of spending behavior across job types reveals distinct patterns in spending capacity:

- **Salaried members** typically spend **$4,000 or more**, with a wider spending range between **$4,610.74 and $5,349.17**. The highest spender in this category reached **$6,575.28**.

- **Hourly members** tend to spend **$3,000 or more**, though a significant group within this category has higher earnings, allowing for increased spending. Members spending between **$3,000 and $4,000** likely have **lower hourly wages or work fewer hours**, while those spending **up to $5,000** likely have higher pay. A **notable group spends around $6,000**, suggesting they are among the **highest earners**. Interestingly, the data highlights that **more high earners exist in the hourly job category** compared to the salaried category.
- **Members with an unknown job type** either spend **below $3,000** or fall within the **$4,000–$6,000** range. These members have a **narrower spending range**, with the **middle 50% spending between $4,366.24 and $5,141.62**, and a **maximum spend of $5,769.76**.

This analysis suggests that while salaried members generally have higher spending capacities, **a considerable number of high-earning hourly members exist**, presenting opportunities for targeted marketing and engagement strategies. **(Appendix 5-6)**

Conclusion

The analysis of the Gold Zone Players Club membership data provides key insights into member engagement, spending behavior, and game preferences. By evaluating spending patterns, visit frequency, and demographic trends, we have identified critical factors that influence customer participation.

Key findings include:

- **Game Popularity**: "Star Wars" emerged as the most popular game, while "Dance Dance Revolution" had the highest average spending despite being one of the least played games. These insights suggest that certain games attract a niche but high-spending audience, while others struggle to generate both engagement and revenue.
- **Spending Behavior**: Members' total spending is generally concentrated between **$4,000 and $6,000**, with salaried members spending more on average, though high-earning hourly workers also exhibit strong spending capacity.
- **Demographic Insights**: Game preferences differ by gender and age, providing opportunities for targeted promotions and events.
- **Spending Variability**: The frequency of visits varies significantly among members, even though spending levels remain relatively consistent.

Actionable Insights for Marketing

Based on the data, here are a few suggestions to enhance marketing and engagement:

- **Targeted Events:** Organize game-themed nights or tournaments for specific demographics. For example, a ladies' night for Dance Dance Revolution or a competitive Star Wars tournament for male members.
- **Customer Loyalty Programs:** Develop personalized loyalty programs based on members' spending habits to encourage return visits and spending.
- **Partnerships:** Explore collaborations with brands that align with specific demographics. For instance, members who enjoy Dance Dance Revolution could be offered discounts on fashion or beauty products.

This data-driven approach will help Lobster Land better understand its customers and tailor its offerings accordingly, ultimately improving engagement and sales.

This analysis provides a comprehensive overview of member behavior and preferences within the Gold Zone Players Club, offering valuable insights to improve marketing and operational strategies.

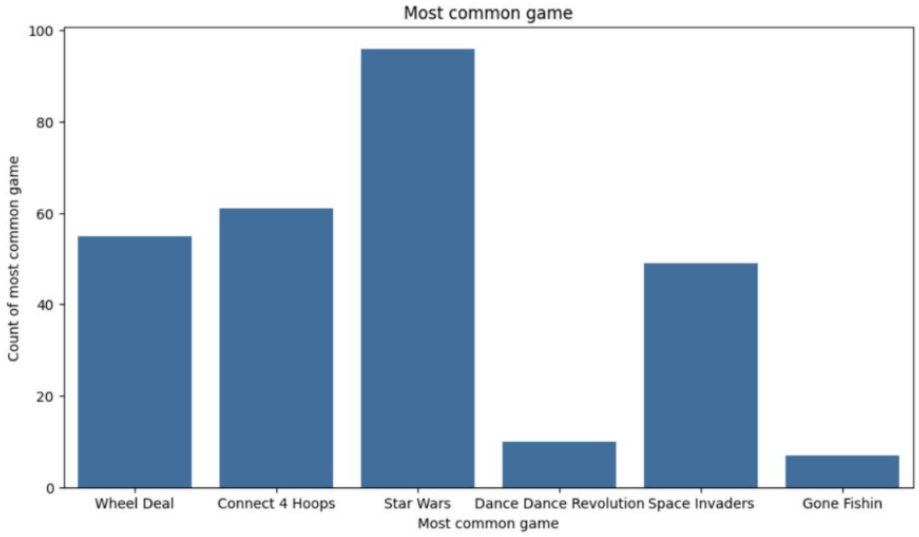
Appendices

Appendix 1

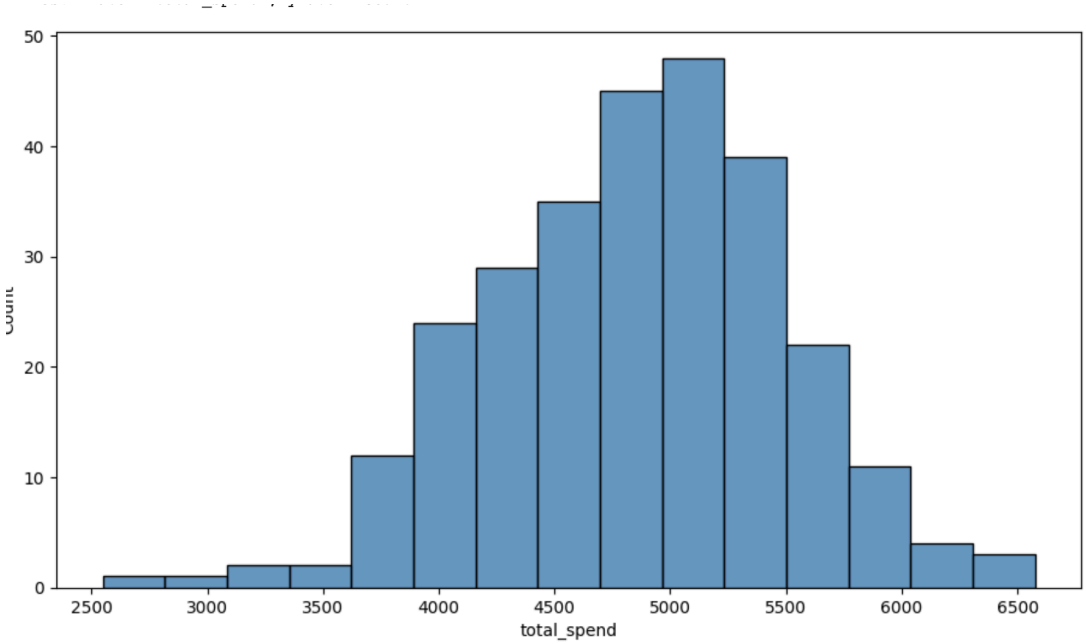
```
total_spend_mean =gzpc.total_spend.mean ()
cv_total_spend = (total_spend_std/total_spend_mean)
print("CV of total spend", cv_total_spend)

total_visit_mean= gzpc.total_visits23.mean()
cv_total_visit = (total_visit_std/total_visit_mean)
print("CV of total visit", cv_total_visit)
```

```
CV of total spend 0.13257300165132846
CV of total visit 0.2794037256469066
```

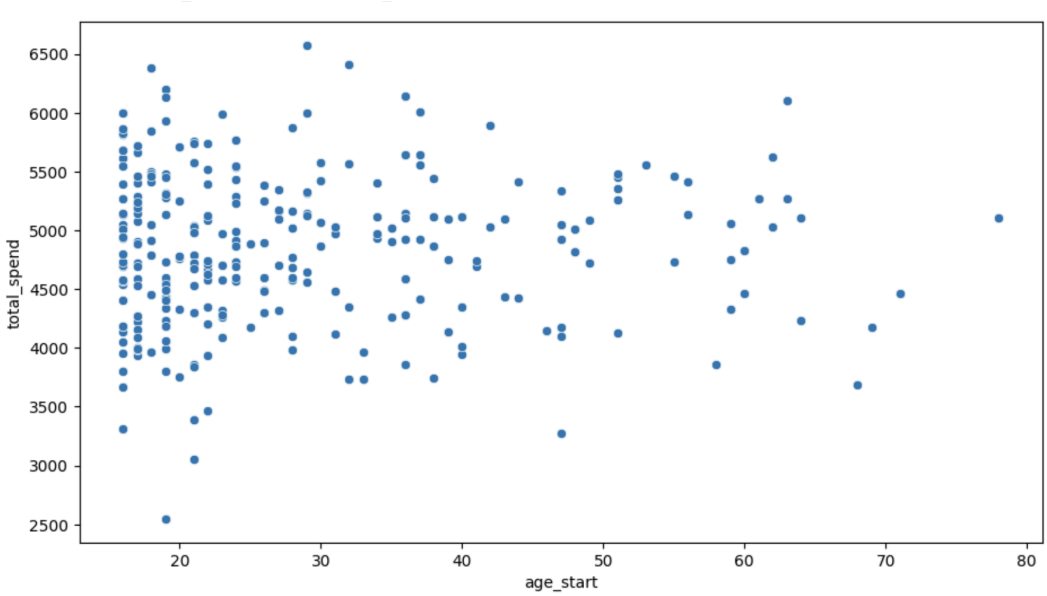
Appendix 2



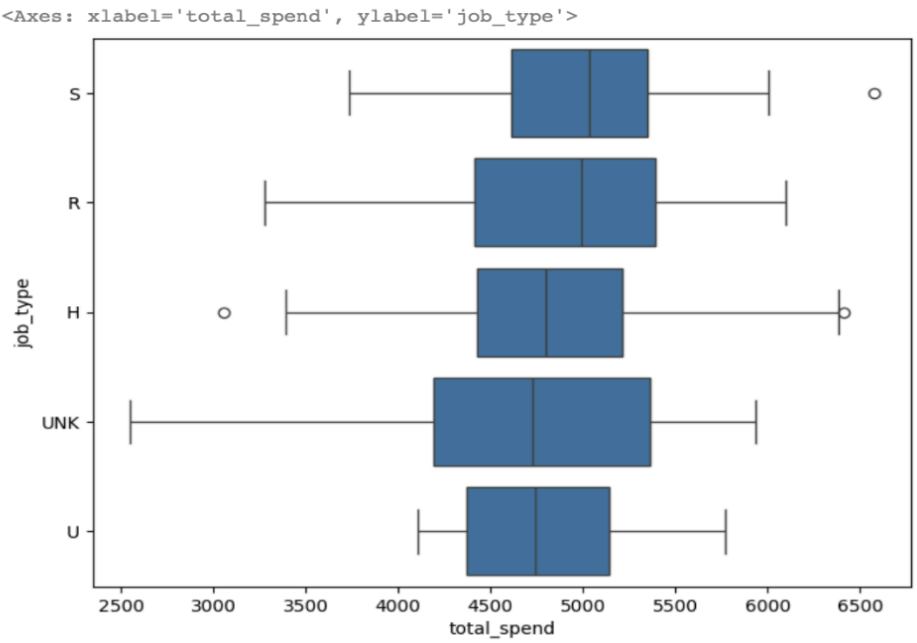
Appendix 3



Appendix 4



Appendix 5



Appendix 6