COURSE PROJECT MILESTONE -2 (USER-LEVEL ANALYSIS)

CATEGORY: GYMS

Query 1: Top 10 Users by Review Count

- **Importance**: Identifies the most active contributors of reviews, helping gyms recognize key influencers.
- **Results:** A ranked list of the top 10 users with the highest review counts.
- **Visualization:** A bar chart displays the number of reviews for the top 10 users, with user IDs on the x-axis and review counts on the y-axis.
- **Insight:** A small subset of users is highly active in leaving reviews, potentially indicating key influencers or loyal users. These users may hold valuable opinions that could drive engagement or improvements.

Query 2: Average Stars Given by Users

- **Importance:** Provides insight into user satisfaction and trends in rating behavior.

- **Results:** Average star ratings given by randomly sampled users.

- **Visualization:** A bar chart compares the average stars given by 10 randomly selected users, with user IDs on the x-axis and average stars on the y-axis.

- **Insight**: Most users tend to give moderately high ratings, reflecting overall satisfaction with gyms. Outliers with low average ratings may indicate users with consistently negative experiences, worth further investigation.

Query 3: Most Useful Tips by Users

- **Importance:** Highlights users whose tips are perceived as valuable, enabling gyms to prioritize constructive feedback.

- **Results:** The top 10 users with the highest total "useful" votes on their tips.

- **Visualization:** A bar chart showing the number of useful votes for the top 10 users, with user IDs on the x-axis and total useful votes on the y-axis.

- **Insight:** A few users contribute significantly valuable feedback, as indicated by their high "useful" votes. These tips can help gyms improve services or focus on areas highlighted in constructive feedback.

Query 4: Account Age of Gym Users

- **Importance:** Evaluates the longevity of user engagement, providing insights into platform retention.

- **Results:** Distribution of account ages for gym users, calculated from the current year and their account creation year.

- **Visualization:** A bar chart shows the number of users in each account age bracket, with account age on the x-axis and user count on the y-axis.

- **Insight:** The platform has a healthy mix of newer and older users, indicating steady user growth and retention over time. Older accounts may represent loyal customers, while newer accounts highlight the platform's ability to attract fresh audiences.

Query 5: Total Contributions (Reviews + Tips) by Gym Users

- **Importance:** Assesses overall user activity to identify the most active contributors across reviews and tips.

- **Results:** Top 10 users with the highest combined contributions.

- **Visualization:** A bar chart displays total contributions, with user IDs on the x-axis and combined review and tip counts on the y-axis.

- **Insight:** The most active contributors often engage in both reviews and tips, suggesting these users are deeply invested in sharing their experiences. Engaging these top contributors with rewards or recognition could boost overall engagement.

Query 6: Fan Count by Gym Business

- **Importance:** Indicates customer loyalty and engagement for each gym.

- **Results:** The top 10 gyms with the highest fan counts, calculated by aggregating fan information for each business.

- **Visualization:** A bar chart showing fan counts for the top gyms, with business IDs on the x-axis and fan counts on the y-axis.

- **Insight:** Gyms with the highest fan counts likely have strong brand loyalty and customer satisfaction. These gyms may be setting benchmarks in customer service or amenities, making them potential role models for others.

Query 7: Loyal Users Returning to the Gym Repeatedly

- **Importance:** Measures retention and loyalty, providing insights into gyms' success at maintaining a consistent customer base.

- **Results:** Top 10 gyms with the highest counts of users who repeatedly returned.

- **Visualization:** A bar chart shows the number of returning users for each gym, with business IDs on the x-axis and returning user counts on the y-axis.

- **Insight:** Gyms with a high number of returning users excel in customer retention and loyalty, possibly due to superior services or value propositions. Gyms with fewer returning users might need to revisit retention strategies, such as personalized offers or improved amenities.

Query 8: Correlation Between Review Count and Ratings

- **Importance:** Explores whether users who leave more reviews tend to give higher or lower ratings, uncovering potential bias or patterns.

- **Results:** A scatterplot shows the correlation between review count and average ratings for all users.

- **Visualization:** A scatter plot visualizes review count on the x-axis and average ratings on the y-axis, showing the distribution of users' data points.

- **Insight:** Users with more reviews tend to give consistent ratings, either high or low, indicating potential bias or established preferences. Gyms receiving more reviews often have higher engagement but may not always align with high ratings.

Query 9: Top Funny Reviews Given by Users

- **Importance:** Highlights humorous or engaging reviews that may boost user interest and entertainment value.

- **Results:** Top 10 funniest reviews based on "funny" votes.

- **Visualization:** A bar chart compares the "funny" vote counts for the top 10 reviews, with review IDs on the x-axis and funny vote counts on the y-axis.

- **Insight:** Funny reviews contribute to user engagement, making the platform more entertaining and relatable. Highlighting these reviews could boost platform activity and encourage others to leave creative feedback.
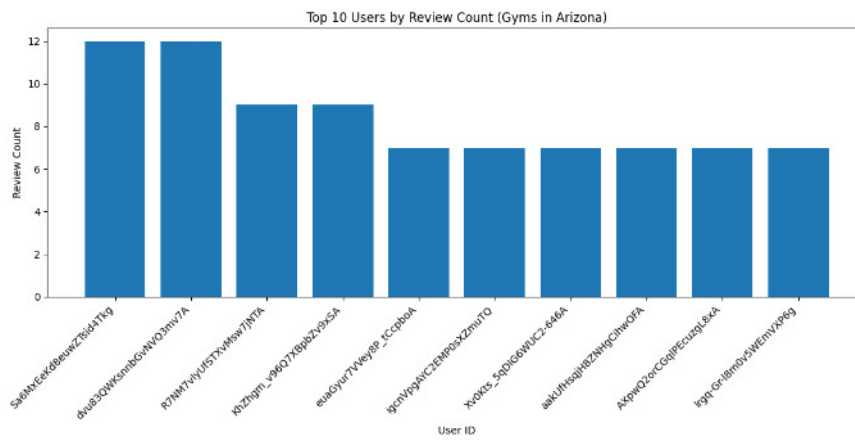
Query 10: Ratio Between First-Time and Returning Users in Gyms

- **Importance:** Identifies gyms excelling at attracting new users versus retaining existing ones, guiding targeted improvements.

- **Results:** First-time and returning user counts for the top 10 gyms.

- **Visualization:** A grouped bar chart compares first-time and returning users for each gym, with business IDs on the x-axis and user counts on the y-axis.

- **Insight:** Gyms attracting more first-time users may have better marketing or appeal to new customers. Gyms with higher returning user ratios demonstrate strong retention strategies, providing a balance between acquiring and maintaining customers.
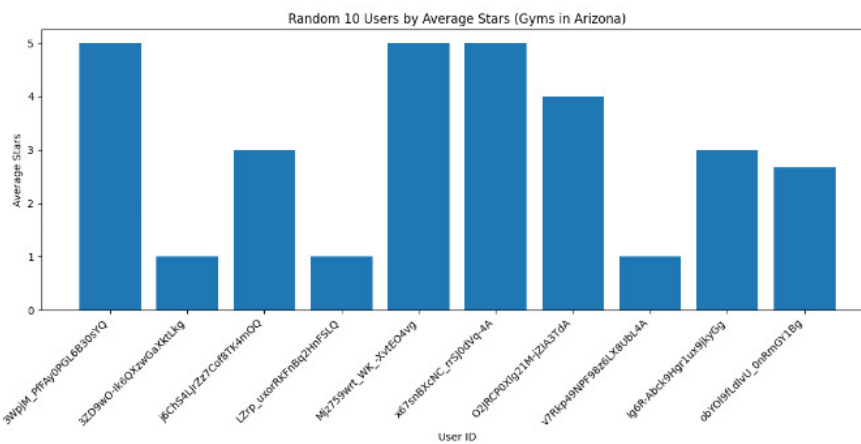
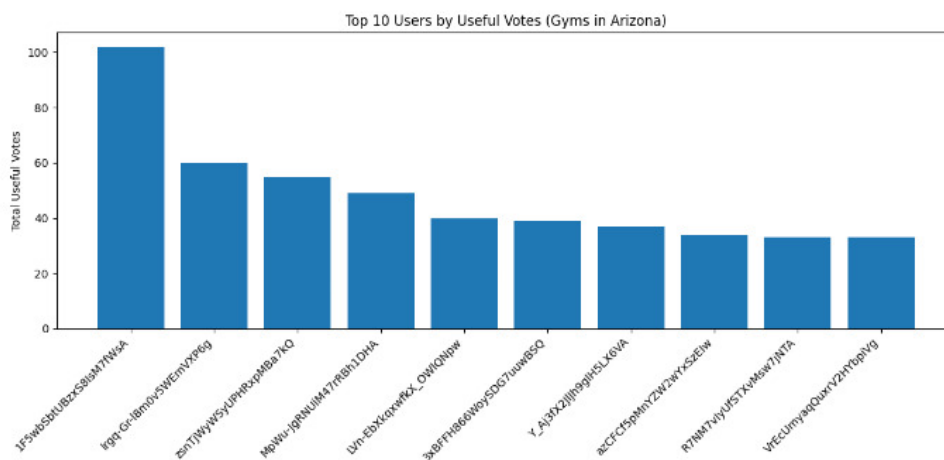**OUTPUTS:**

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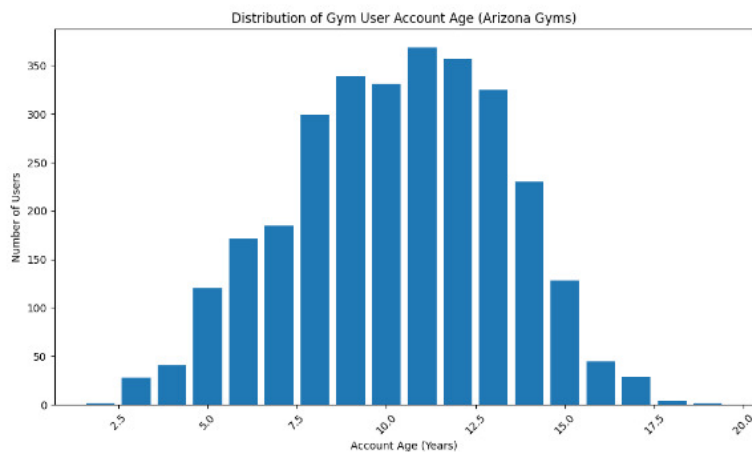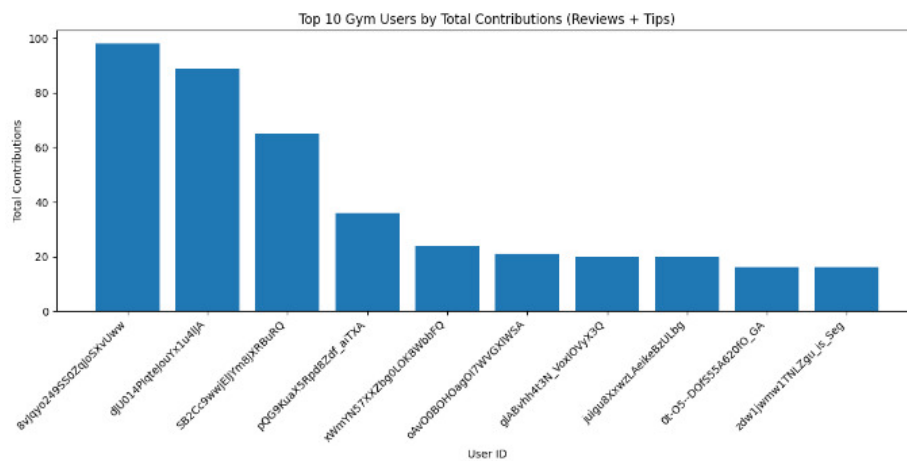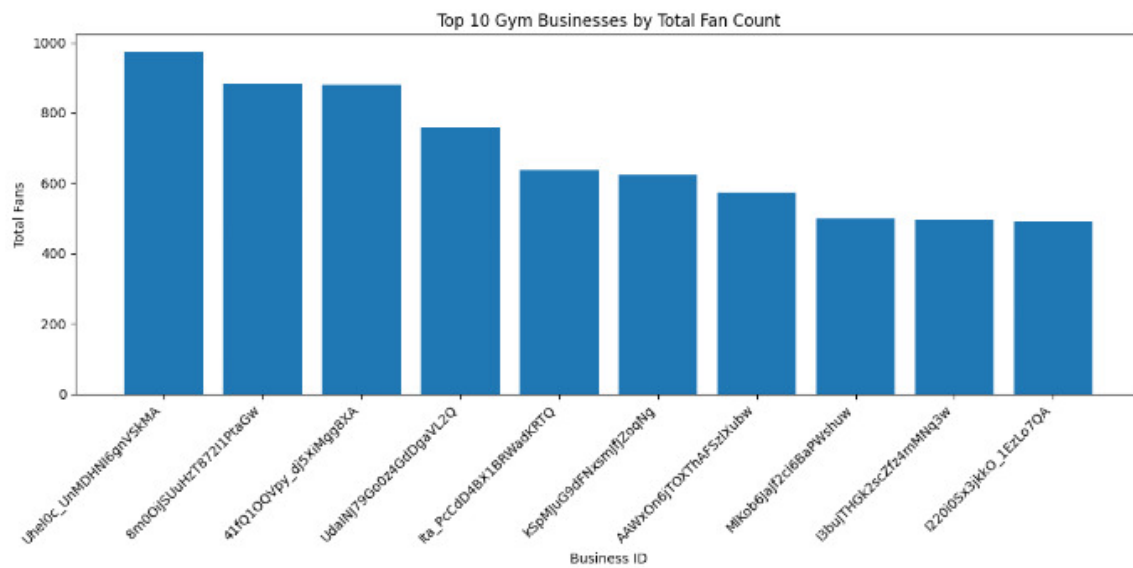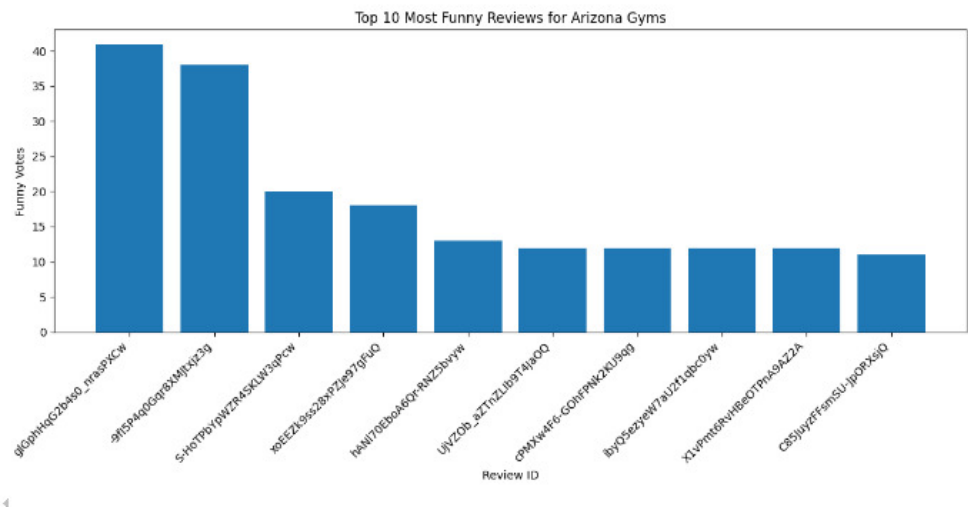
Query 1:

Query 2:

Query 3:

Query 4:

Distribution of Gym User Account Age (Arizona Gyms)

Query 5:

Top 10 Gym Users by Total Contributions (Reviews + Tips)

Query 6:

Top 10 Gym Businesses by Total Fan Count

Query 7:

Top 10 Gym Businesses by Loyal User Count

Query 8:

Correlation Between Review Count and Average Stars (Arizona Gyms)

Query 9:

Top 10 Most Funny Reviews for Arizona Gyms

Query 10:

First-Time vs Returning Users for Arizona Gyms (Top 10)