

Discovering Customer Insights: Segmentation Analysis for Improving the Reward Program

by Moritz Panni

Date: 06.09.2024

BACKGROUND:

To meet the rising demand for unique customer experiences, TravelTide's marketing team is considering the creation of a customized rewards program. To guide this effort, we carried out a customer segmentation analysis, which provided key insights into various customer preferences and behaviors. This data-driven strategy is intended to establish the groundwork for a more personalized and customer-focused rewards program, in line with TravelTide's commitment to offering exceptional travel experiences.

OBJECTIVES:

Our main goal was to identify and define customer segments based on their booking behaviors, focusing on those most likely to value the perks TravelTide plans to offer. These segments are intended to form the basis of an upcoming rewards program, customized to align with individual preferences.

METHODOLOGY:

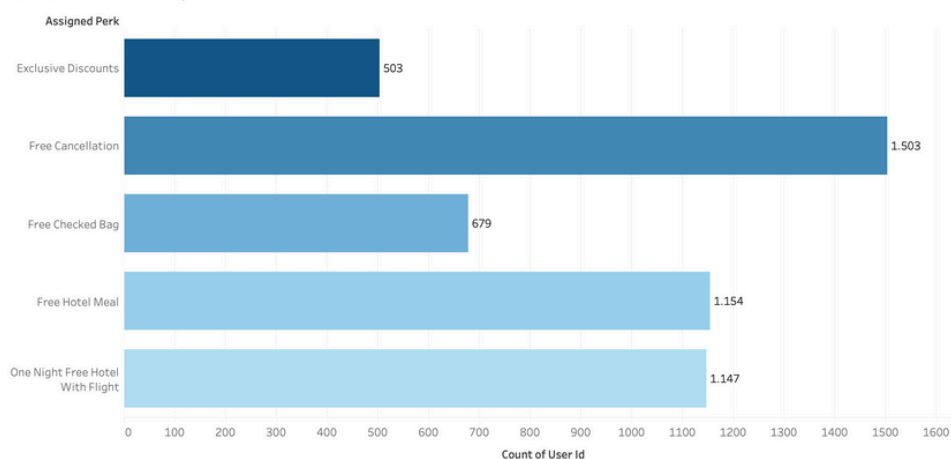
We began the analysis by extracting raw data from four key tables using SQL. Afterward, we processed and analyzed the data in Python, using the K-Means clustering technique to identify five distinct customer clusters based on their behavior, with each cluster linked to a specific proposed perk.

KEY FINDINGS:

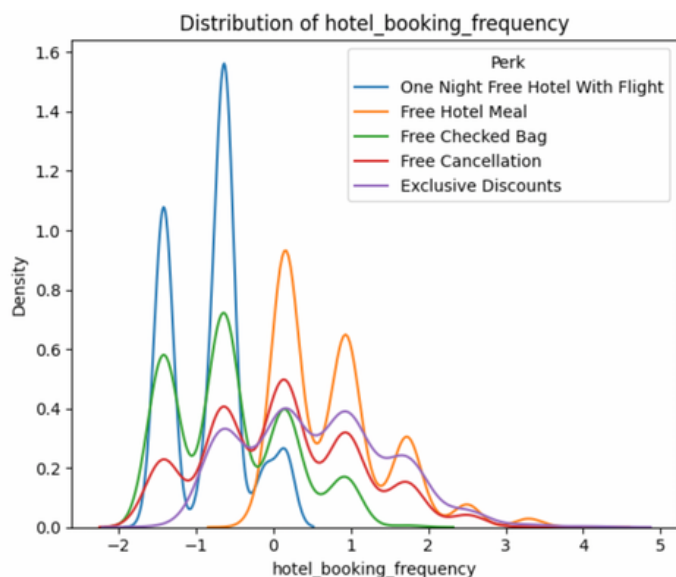
Our analysis has provided valuable insights that will shape the foundation of TravelTide's upcoming rewards program. The "Exclusive Discounts" cluster clearly shows a strong preference for cost-effective bookings, offering a clear direction for targeted perks. Similarly, the "Free Hotel Meal" cluster highlights a significant interest in complimentary dining options. While the "Free Checked Bag" cluster isn't entirely distinct, it still indicates a preference for baggage-related perks. Our findings also suggest the need to streamline perks for greater program efficiency.

Additionally, the minimal variability in cancellation and trip percentage data suggests the importance of a more refined approach. Together, these insights create a solid foundation for developing a rewards program that will resonate with our diverse customer base, enhancing both engagement and satisfaction.

Distribution of Users per Cluster

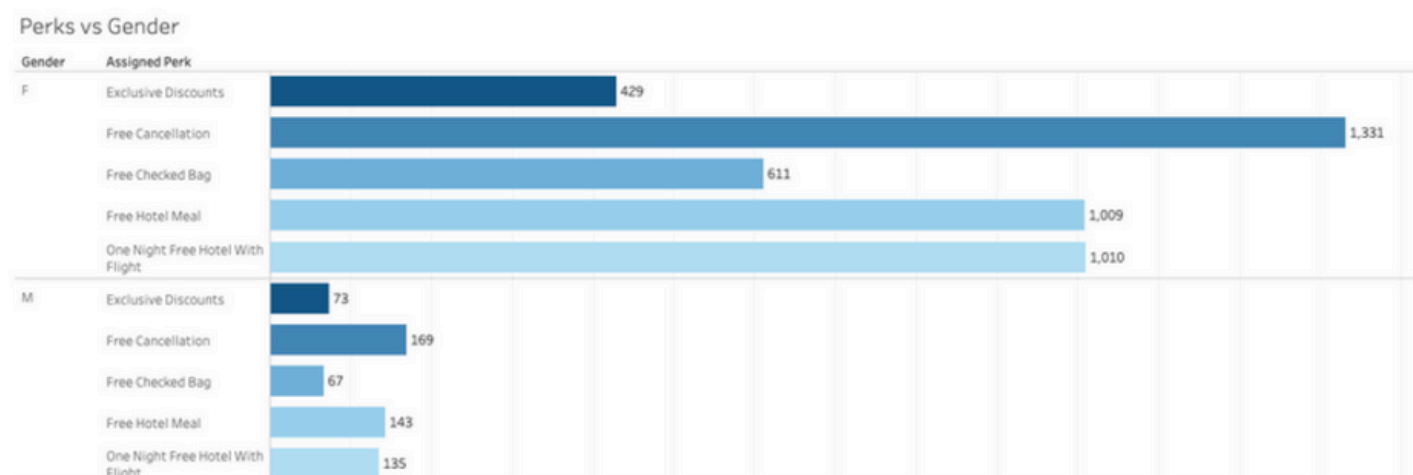


The cluster sizes correspond to their associated perks. The "Exclusive Discounts" cluster is understandably the smallest. On the other hand, the "Free Cancellations" cluster, which appeals to cost-conscious users with no prior cancellations, is the largest. Given the minimal number of cancellations in the dataset, this cluster provides added booking security at no extra cost, which explains its larger size.



The line chart shows how each cluster is distributed based on hotel booking frequency. The "Free Hotel Meal" cluster, in particular, has a wider distribution, indicating its popularity. However, it's notable that there is significant overlap among clusters, which is consistent across different perks. This overlap suggests that although clusters are designated according to users' top preferences, many individuals are interested in multiple perks. Therefore, implementing a multi-level rewards program could better address this diverse range of customer preferences.

KEY FINDINGS:



It's important to note that the dataset shows a majority of users are female, and this trend is reflected in each cluster as well. To address this gender imbalance, it could be advantageous to create a targeted marketing strategy to encourage more male participation in booking activities. By focusing on this demographic, TravelTide can broaden its customer base and introduce greater diversity into its rewards program, making it more appealing to a wider audience.

RECOMMENDATIONS:

To boost customer engagement and satisfaction, we should consider introducing a multi-level rewards program that provides different perks at various stages of customer interaction. This strategy takes into account the observed overlap in customer preferences and behaviors, which could lead to increased booking activities. Additionally, we might explore merging overlapping perks, such as combining the "Exclusive Discounts" and "Free Hotel Meal" clusters, which show similar preferences.

To stay aligned with shifting customer preferences, we could periodically update the clustering process using a larger dataset collected over a longer period. A more extensive dataset can offer greater variability, particularly in cancellation-related data, allowing for more detailed segmentation and targeted strategies.

Incorporate a feedback mechanism into the rewards program to gather direct insights from customers. Encouraging participants to share their preferred perks and suggest new ones will help refine the program and ensure it remains relevant and attractive.

Moreover, develop targeted marketing campaigns based on cluster insights, tailoring promotions and advertisements to match each cluster's preferences and behaviors. Aligning marketing messages and perks with these insights can significantly enhance engagement and conversion rates, leading to higher customer satisfaction and loyalty.

Lastly, address the gender balance within clusters by implementing strategies to encourage more male participation in booking activities, promoting a more diverse and inclusive customer base.

APPENDIX:

- Access the project's Jupyter Notebook [HERE](#) for a detailed analysis.
- Explore the SQL query used in the project [HERE](#) to understand data extraction and manipulation.
- View the interactive Tableau Dashboard [HERE](#) to visualize key insights.
- Refer to the presentation slides [HERE](#) for a concise overview of the project's findings.