Analysis Report
For
TRAVELTIDE

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Introduction

TravelTide's initiative emphasizes the segmentation of customer data to address business needs and derive actionable insights from these findings. This technique, known as segmentation, involves grouping similar data points which here represent various customer behaviors within specific business initiatives.

Objectives

Our primary objective was to identify and define customer segments based on their booking behaviors, specifically targeting those likely to appreciate Travel Tide's proposed perks. These segments are designed to serve as a foundation for a forthcoming rewards program, tailored to meet individual preferences.

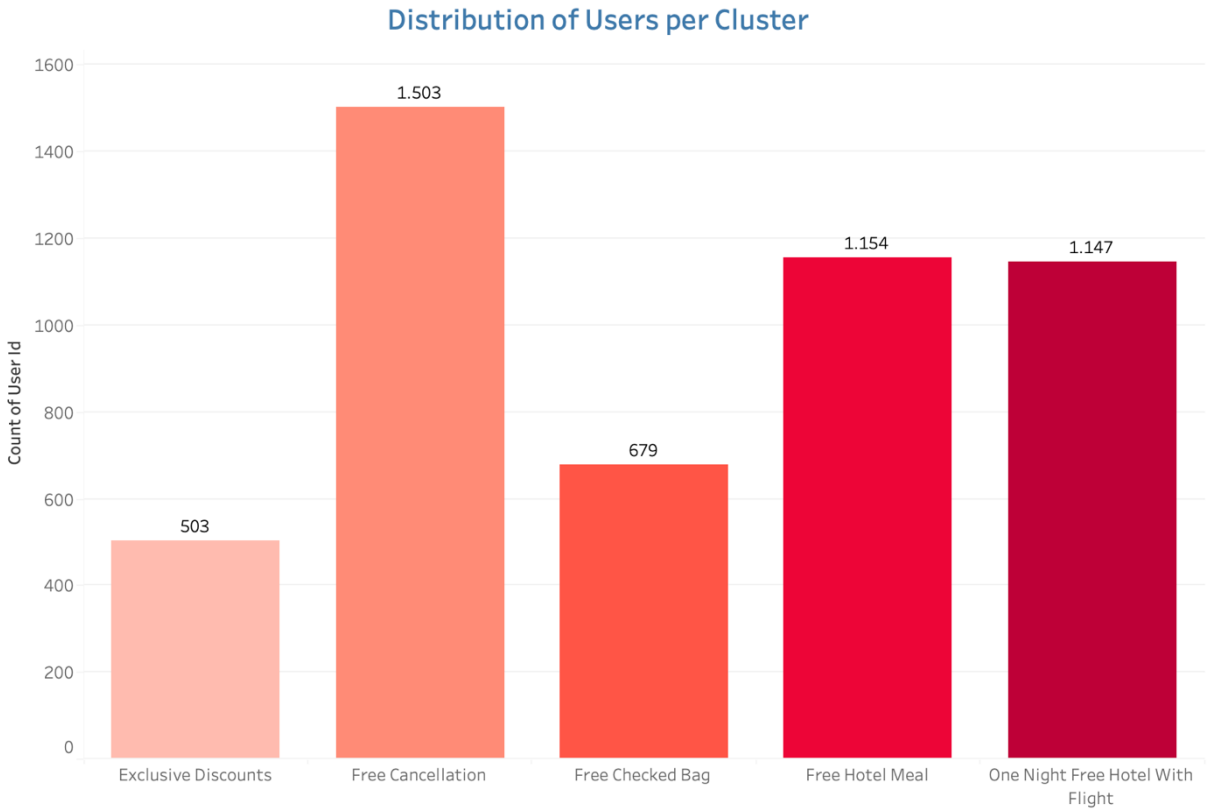
Methodology

We initiated the analysis by extracting raw data from the four essential tables using SQL. Subsequently, we processed and analysed this data in Python, employing the K-Means clustering technique to establish five distinct customer clusters, based on customer behaviour, each linked to a proposed perk.

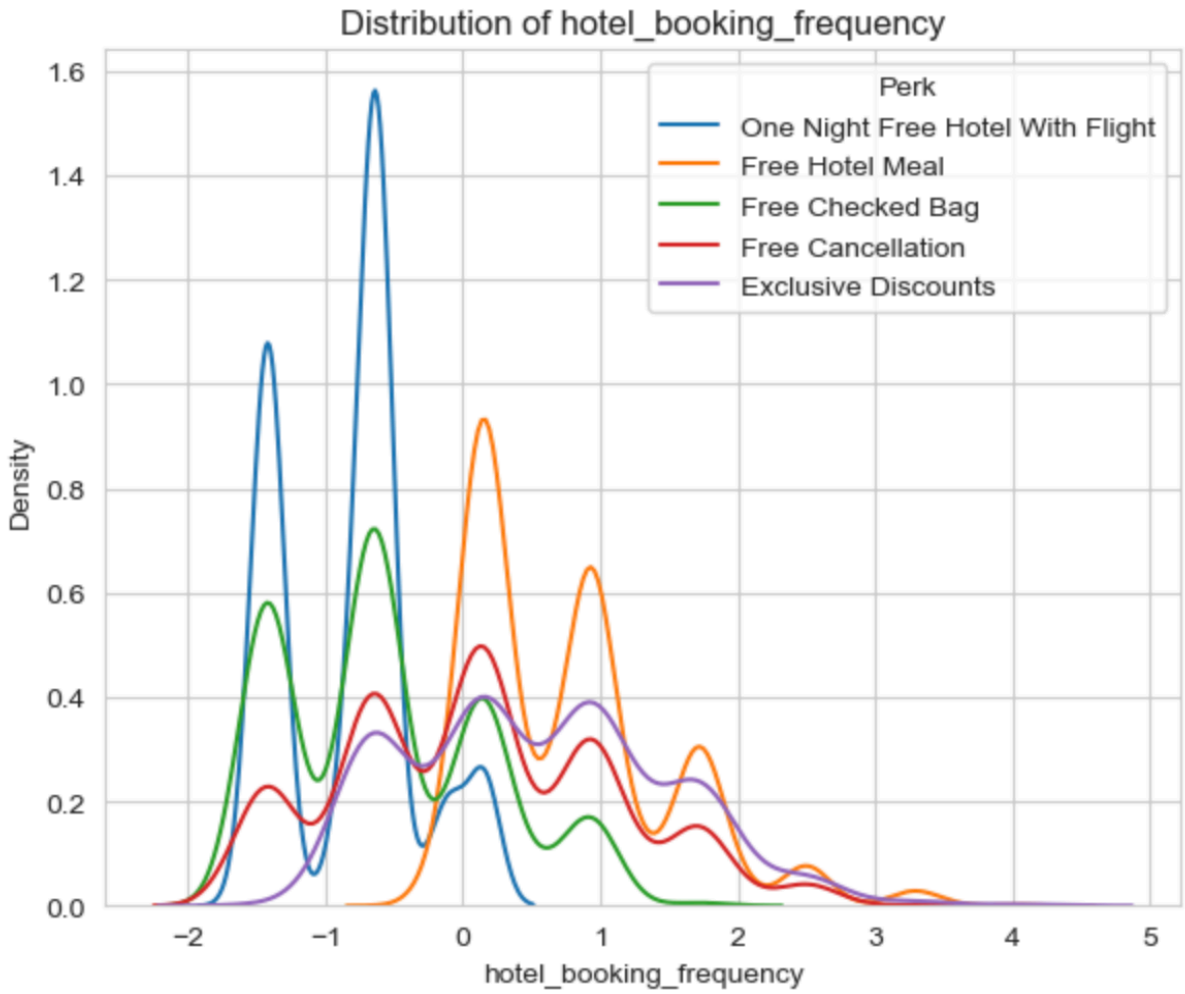
Key Findings

Our analysis has uncovered valuable insights to form the foundation of Travel Tide's upcoming rewards program. Notably, the "Exclusive Discounts" cluster stands out with a strong inclination toward cost-effective bookings, providing a clear focus for tailored perks. Likewise, the "Free Hotel Meal" cluster exhibits distinct characteristics, signalling a keen interest in complimentary dining experiences. While the "Free Checked Bag" cluster, though not entirely distinct, underscores a preference for baggage-related perks. Additionally, our findings emphasise the need to streamline perks for program efficiency.
Furthermore, the limited variability in cancellation and trip percentage data points toward the importance of a refined approach. These discoveries

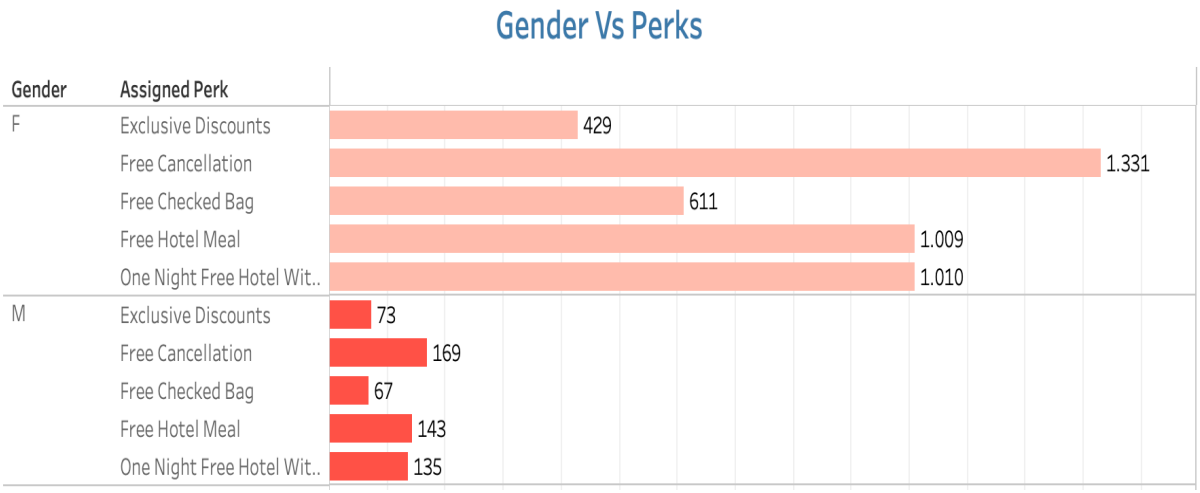
collectively lay a robust foundation for crafting a rewards program that resonates with our diverse customer base, poised to elevate engagement and satisfaction levels.



Cluster sizes align with the corresponding perks. The "Exclusive Discounts" cluster, representing bargain hunters, is naturally the smallest. Conversely, the "Free Cancellations" cluster, catering to cost-conscious users with no prior cancellations, is the largest. With minimal cancellations in the dataset, this cluster offers added booking security without extra expenses, justifying its size.



The line chart illustrates the distribution of each cluster concerning hotel booking frequency. Notably, the "Free Hotel Meal" cluster exhibits a broader distribution, signifying its popularity. However, it's intriguing to observe a substantial overlap among clusters, and this was found to be the case across various perks. This overlap reveals that while clusters are uniquely assigned based on the users highest preferences, many users express interest in multiple perks. Consequently, adopting a multi-level rewards program could cater to this diverse range of customer preferences more effectively.



It's worth noting that a majority of users in the dataset were female, and as a result, women also constitute the majority within each cluster. Given this demographic trend, it may be beneficial to develop a targeted marketing strategy aimed at encouraging men to participate more actively in booking-related activities. By addressing this gender imbalance, Travel Tide can expand its customer base and foster greater diversity within its rewards program, ultimately enhancing its appeal to a broader audience.

Recommendations

To enhance customer engagement and satisfaction, we should consider implementing a multi-level rewards program that offers varying perks based on different stages of customer engagement. This approach aligns with the observed overlap in customer preferences and behaviors, potentially encouraging increased booking-related activities. Additionally, explore the possibility of consolidating overlapping perks within the rewards program, such as combining the "Exclusive Discounts" and "Free Hotel Meal" clusters, which exhibit shared preferences.

To adapt to evolving customer preferences, we could periodically reiterate the clustering process using a larger dataset gathered over an extended timeframe. A broader dataset can introduce greater variability, especially in cancellation-related data, enabling more nuanced customer preference segmentation and refined targeting strategies.

Implement a feedback mechanism within the rewards program to collect direct insights from
customers. Encourage participants to provide feedback on their preferred perks and suggest new offerings. Real-time input from customers will help fine-tune the program to remain relevant and appealing to evolving preferences.

Furthermore, consider developing targeted marketing campaigns based on cluster insights, tailoring promotions and advertisements to the preferences and behaviors of each cluster. By aligning marketing messages and perks with the identified clusters, Travel Tide can significantly boost engagement and conversion rates, leading to improved customer satisfaction and loyalty.

Finally, pay attention to the gender balance within clusters, and consider strategies to encourage men to participate more actively in booking-related activities, ensuring a more diverse and inclusive customer base.