TravelTide: A Data Journey into User Segmentation

1. Introduction

I started the TravelTide project with one main goal: to understand our users better. Using their session-level behavior, I wanted to group them into meaningful customer segments, assign perks that matched their preferences, and ultimately improve engagement. It all began with a CSV file-thousands of rows of session data, each one a clue about how people travel, book, and behave on the platform.

2. Cleaning and Feature Engineering

The first thing I did was clean the data. I filtered out any sessions that had missing or invalid values, especially in booking or discount-related fields. Then I made sure each user had complete session data. Once the dataset was clean, I started engineering features: I calculated total bookings, average discount used, discount sensitivity, cancellation rates, session count, and more. This turned raw logs into actual user profiles.

3. Segmenting Users and Assigning Perks

After building the user-level features, I created customer segments. I grouped users into four categories: High Value, Deal Seekers, Explorers, and Casual users. These segments were based on behavior-some booked often, others used discounts heavily, and a few barely interacted at all. Once I had the segments, I assigned perks tailored to each group. High Value users got VIP perks; Deal Seekers were offered more discounts, and so on.

I exported all of this into a single dataset and loaded it into Tableau Public for visualization.

4. Visualizing the Data

In Tableau, I started by visualizing how users were distributed across the segments. Then I compared average metrics-like how many bookings they made, how often they used discounts, and how sensitive they were to deals. It was clear, for example, that High Value users booked the most but rarely used discounts.

Next, I built a highlight table showing which perks were assigned to each segment. It was a great way to check if my logic matched the real data. Finally, I built timelines. One showed when users first joined the platform, and the other showed when they were last active. This revealed seasonal trends-signups peaked in the summer, but activity dropped off in the fall.

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5. Creating the Tableau Story

To make the insights easier to tell, I built a Tableau Story:

1. Intro - Why I did the analysis
2. Segments Overview - What kinds of users we have
3. Behavior Comparison - How each segment acts differently
4. Perk Assignment - Whether perks align with needs
5. Timeline Trends - Signups vs recent activity
6. Final Thoughts - What this means for business decisions

6. What I Learned

This project helped me turn raw data into real insight. I now have a clear picture of different user types, how they behave, and what motivates them. It also showed me when people tend to drop off the platform, which could guide future retention strategies.

Working through this-from cleaning the data, to engineering features, to telling the story in Tableau-was incredibly valuable. It turned complexity into clarity.