

DATA SEGMENTATION PROJECT

TravelTide marketing campaign



Masterschool
Data Analyst

Introduction

This project involves an examination of the TravelTide database, which contains data related to user activity on a travel agency website. The primary objective is to conduct an analysis that categorizes users into distinct groups based on their website behaviors. This segmentation will facilitate the development of customized marketing campaigns and the provision of tailored perks to users.

Methodology

The analysis was conducted by considering sessions occurring after 01/04/2023 and including users with more than seven sessions. Various behavioral metrics were calculated, and subsequently, indexes were created based on their correlation with specific perks:

- Free hotel meal.
- Free checked bag.
- No cancellation fees.
- Exclusive discounts.
- One-night free hotel with flight.

Analysis

User composition considered in the study:

| | Female | | Male | |
|---------------|---------|-------------|---------|-------------|
| | Married | Not Married | Married | Not Married |
| With Children | 15.87% | 12.69% | 2.15% | 1.87% |
| No Children | 23.60% | 36.23% | 2.41% | 5.18% |

- A predominant portion of the user base is female. This indicates that most users interacting with the travel agency website are women. Particularly, not married and without children.
- Gender labelled as 'Other' was excluded due to lack of representation.

Key metrics that effectively represent each perk's index are outlined below:

1. Free hotel meal:

- *Proportion of hotels booked with discount:* Indicates the percentage of hotel bookings made with discounts out of all bookings.
- *Hotel bookings proportion:* Represents the ratio of hotel bookings to all bookings by a user, highlighting those who favor hotels over flights.

2. Free checked bag:

- *Average price per flight:* This metric calculates the average price a user pays for a flight. It can reveal whether a user typically selects more expensive or budget-friendly flight options.
- *Total checked bags:* Total number of checked bags for a user.
- *Average amount of people travelling:* This metric determines the average number of people traveling per trip.
- *ADS per km:* This metric assesses the average amount of money saved in flights per kilometer traveled.

3. No cancellation fees:

- *Bookings per session:* This metric calculates the average number of bookings made by a user during a session. It can identify users who are having lots of sessions but not booking much.
- *Average session length:* The average duration of a user's sessions on the website. Longer sessions might indicate indecision at the time of making a booking.
- *Total cancellations:* Users with fewer cancellations may be less concerned about cancellation fees.

4. Exclusive discounts:

- *Proportion of flights booked with discount:* This metric calculates the proportion of flights booked with discounts by a user. It identifies users who frequently seek discounted flight options.
- *Proportion of hotels booked with discount:* Similar to the flight metric, it represents the proportion of hotel bookings made with discounts.
- *Proportion of hotel discounts taken: Proportion hotel discounts booked out of all hotel discounts offered.*
- *ADS per km*

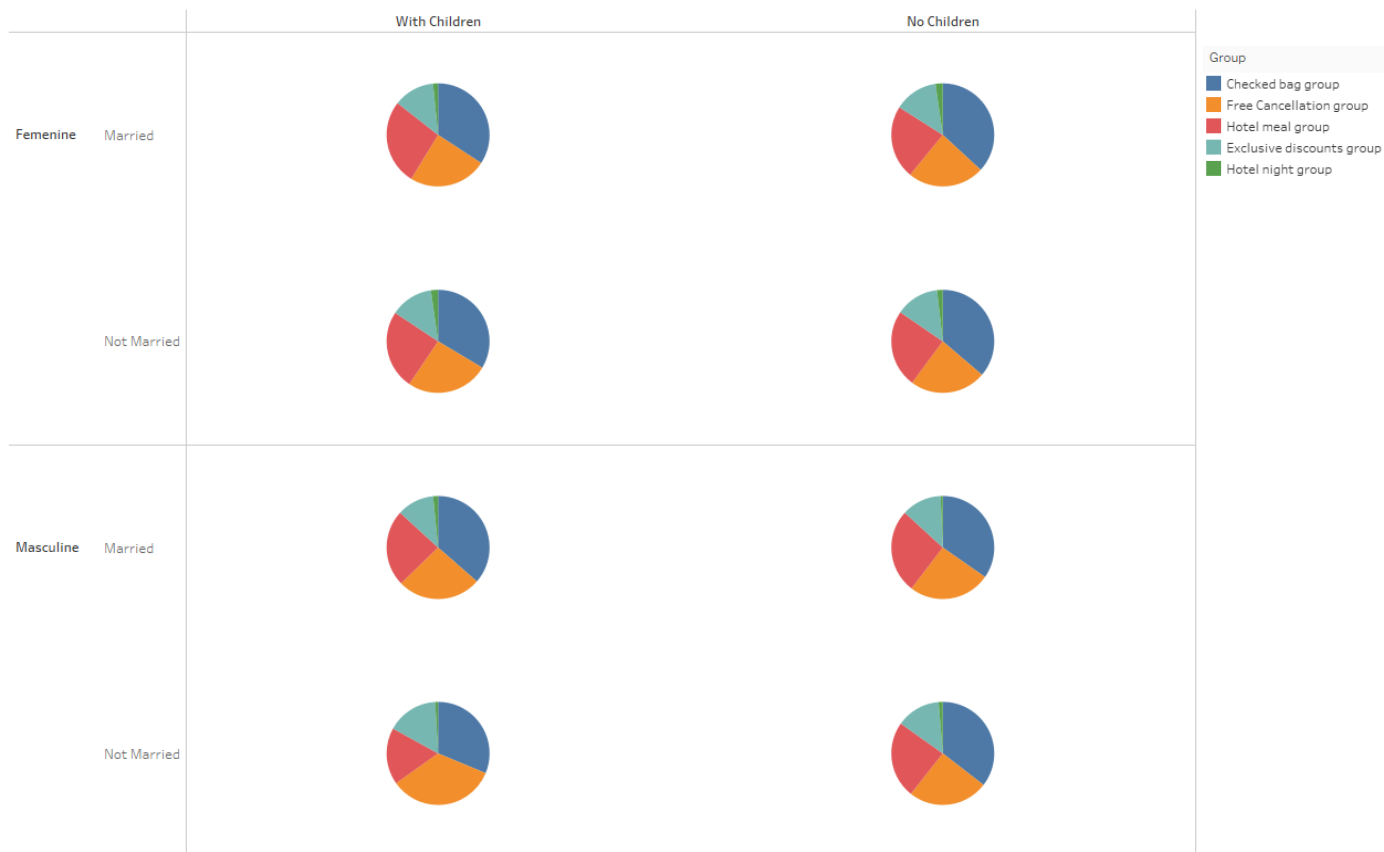
5. One-night free hotel with flight:

- *Proportion of hotels booked with discount:* Users with higher discounts may be more interested in hotel-related perks.
- *Hotel – Flight ratio:* This metric compares the number of hotel bookings to flight bookings for a user. It helps identify users who frequently book a hotel with their flight.
- *Average nights booked per trip:* The average number of nights a user books for accommodations per trip. It can highlight users who prefer longer stays.

Groups composition:

| | |
|---------------------------|--------|
| Checked bag group | 35.55% |
| Free Cancellation group | 24.64% |
| Hotel meal group | 24.42% |
| Exclusive discounts group | 13.54% |
| Hotel night group | 1.85% |

- The group assigned to the 'Free Checked Bag' perk had the highest number of users among all the perks, indicating a substantial user interest in this perk.
- The groups associated with 'Free Cancellation' and 'Free Hotel Meal' perks had nearly identical numbers of users, suggesting a relatively balanced interest in both perks.
- The group assigned to the "Free Hotel Night" perk had an exceptionally low number of users, indicating minimal interest or engagement with this perk.



- It's worth noting that the composition of user groups did not significantly differ based on gender, marital status, or whether users had children. The distribution of these groups mirrored the overall distribution, regardless of these demographic factors.

Recommendations

Since the "Free Checked Bag" perk garnered the most users, it may be wise to prioritize this perk in marketing efforts, as it appears to align with a significant portion of the user base.

Due to the extremely low number of users in the "Free Hotel Night" perk group, reconsider the inclusion of this perk in marketing campaigns. It may not resonate well with the user base and could be replaced with a more appealing alternative.

Appendix

- [Presentation video](#)