Hostelworld
Senior Product Data Analyst Assessment

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Overview and Challenges

In this assessment we're creating strategies to leverage the LTV of Hostelworld customers by analyzing their purchase behavior.

LTV is one of the most important indicators for service companies, since it determines the overall profitability of the business.

The dataset provided has only one row per customer with the information of one purchase and the total LTV of that specific client.

Since we don't have more detailed information about their engagement with the company over time, the analysis will be based on the behavior of one single purchase, what may bias the results, since a customer may change their purchasing behavior over time.

LTV Clustering Benefits

1. **Profitability assessment:**
   focus on high-value clients

2. **Tailored offerings:**
   know what you valuable clients want

3. **Spend optimization:**
   aim your targets more accurately

4. **Enables acquisition and retention strategies:**
   know where to focus

5. **Empowers pricing:**
   *set your price to maximize your customer value*

6. **Product development opportunities:**
   *get insights from your customers behavior*

LTV Clustering Insights

In few words, the more days in beforehand the client purchases, the more nights is booked, the more distant the travel is and the more expensive the purchase is, the more LTV this client tends to return. Web purchases tend to have better performance than app purchases as well, while the month of purchase didn't make significant different for the LTV returns.
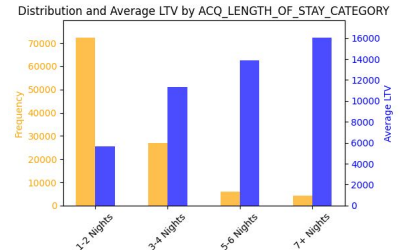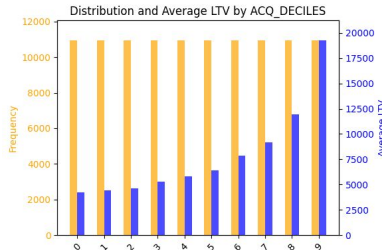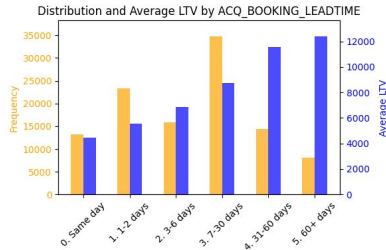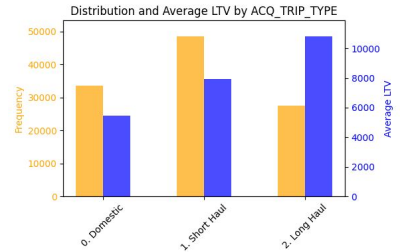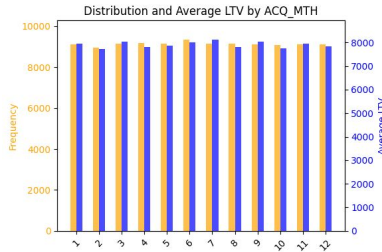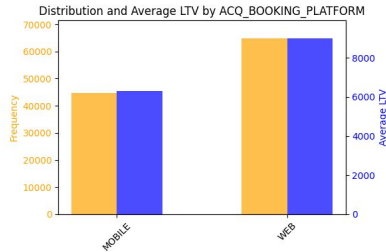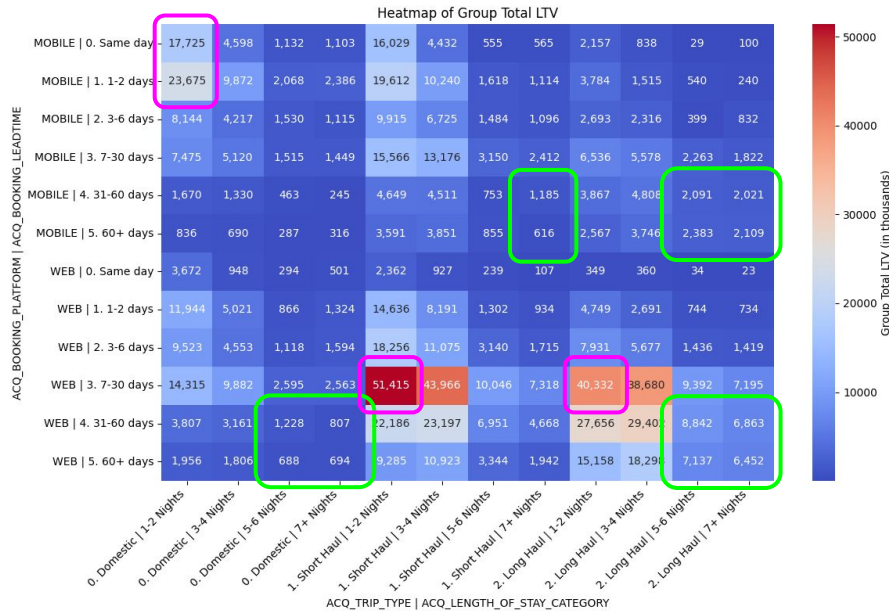
LTV Clustering Insights

Only few clients are in the most profitable groups and the biggest groups have low profitability.

LTV Clustering Insights

Heatmap of Group Total LTV
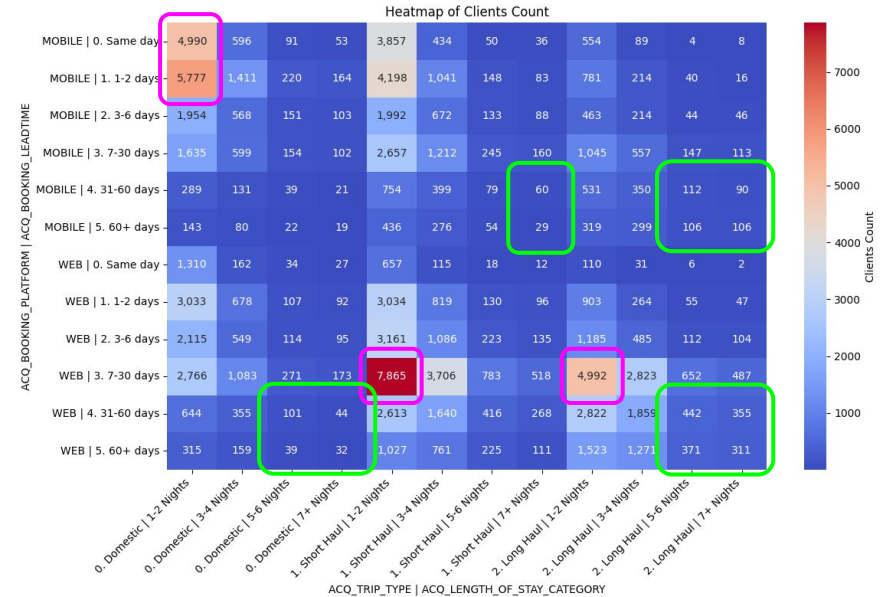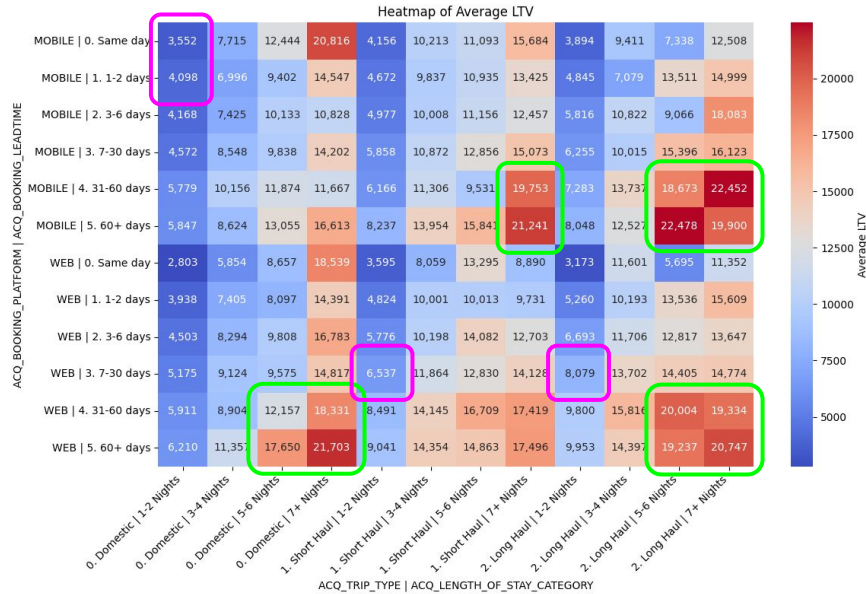
Analyzing the total LTV expected for each group, we could see that the most valuable groups aren't the best, because they have few clients.

In other hand, we could see that one of the groups with the most clients is indeed the most profitable as well.

The best performing customers are those who purchase in the web between 7 and 30 days before travel and book 1 to 4 nights, excluding domestic travels.