

Capstone Project - 1

Team 6 : Hotel Bookings Analysis

Content

1. **Problem Statements**
2. **Data Summary**
3. **Analysis of Data**
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List

Problem Statements

1. When is the worst time to go to Portugal? - Customer
2. What kind of people go to Portugal? - Facilitator/Owner
3. What impacts cancellations? - Owner

Data Summary

The dataset spans over three years - 2015, 2016 and 2017.

- 1. 'hotel':** Denotes the type of hotel - Resort hotel or city hotel
- 2. 'canceled':** Denoted by '1' if booking was cancelled or '0' otherwise
- 3. 'lead_time':** Period between time of booking and checking in (considered in days here)
- 4. 'arrival_date_month':** The month the customer arrived at the hotel
- 5. 'country':** The country of origin of the customer; has 158 countries listed
- 6. 'adr':** Average rental revenue earned for an occupied room per day
- 7. [Additional] Booking category:** 'individuals', 'couples' and 'family'

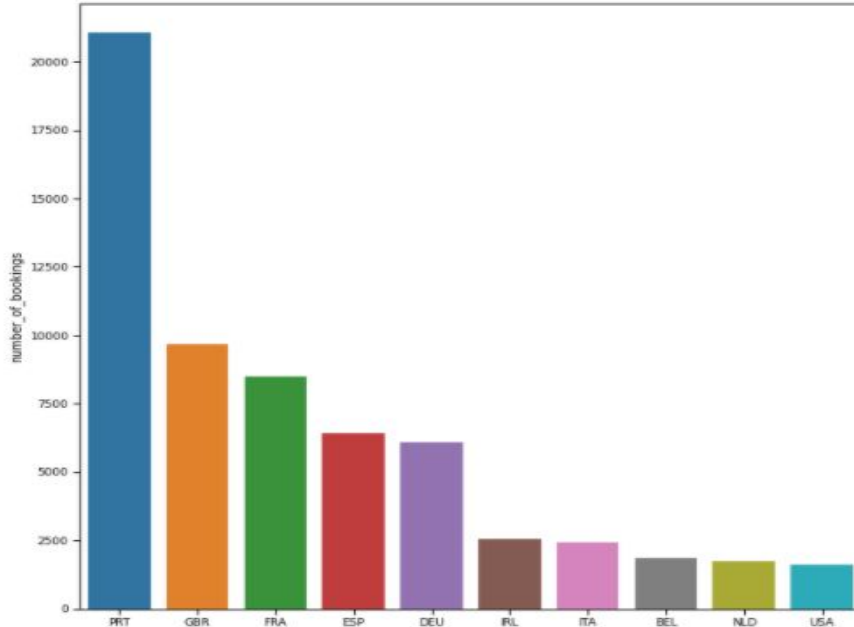
Data Summary (contd)

Assumptions:

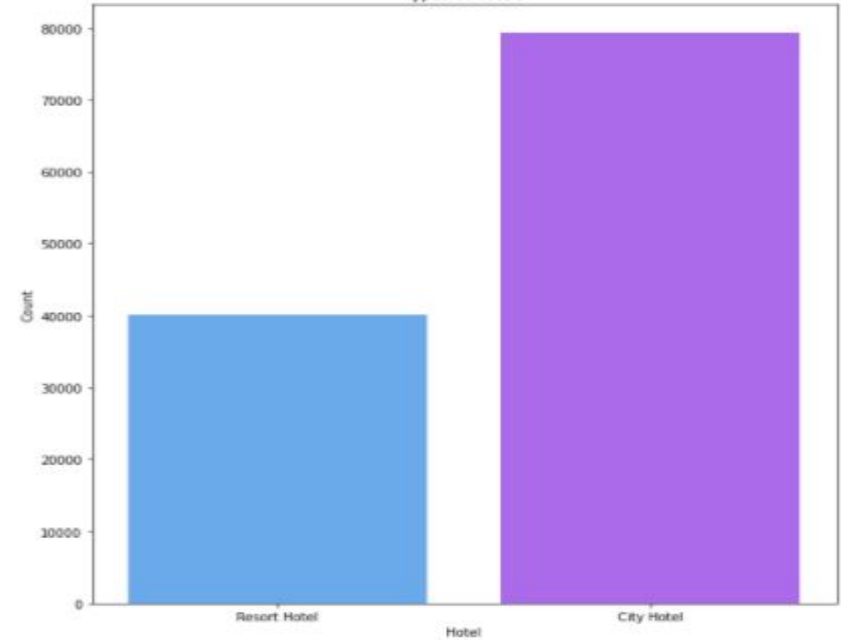
1. Rows where the ADR reads zero but the status reads 'check-out' have been ignored
2. Rows where the number of people sums up to zero, but the status reads 'check-out' have not been considered
3. Market segments are considered distribution channels

Customer: Portugal, here we come...or not

Top 10 countries by number of bookings

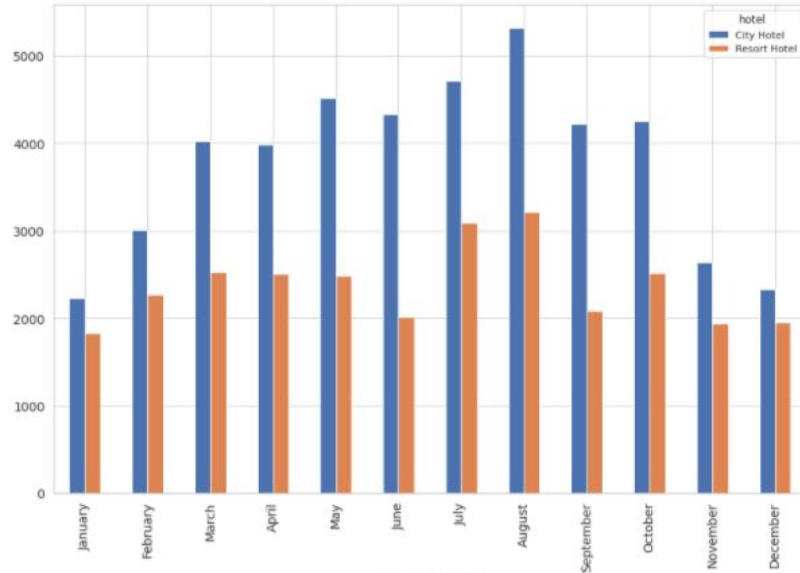


Break-up of types of hotels

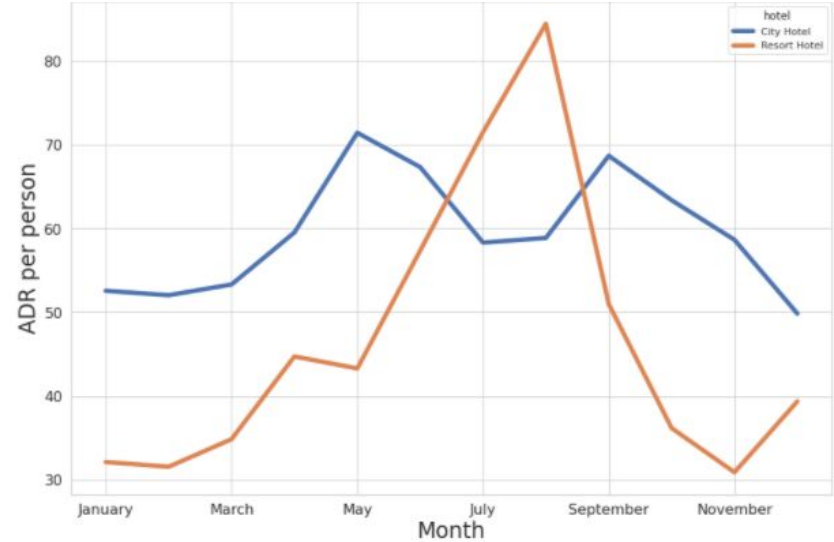


Customer: Portugal, here we come...or not

Break-up of most busy months by type of hotel



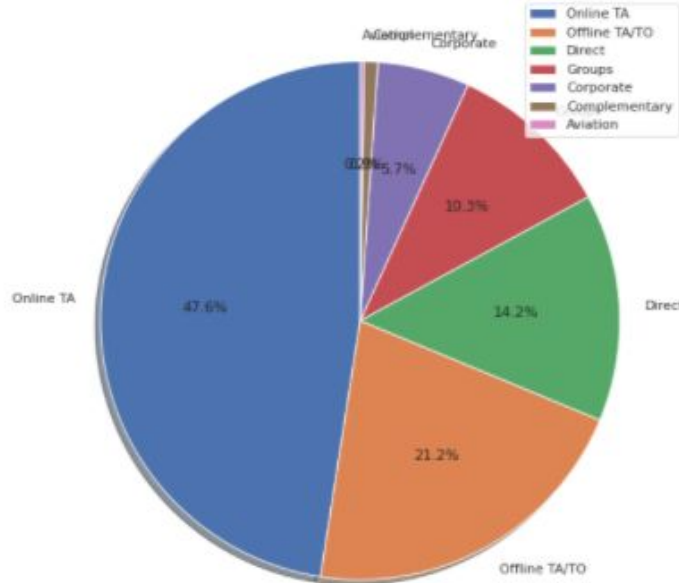
ADR trends over the months



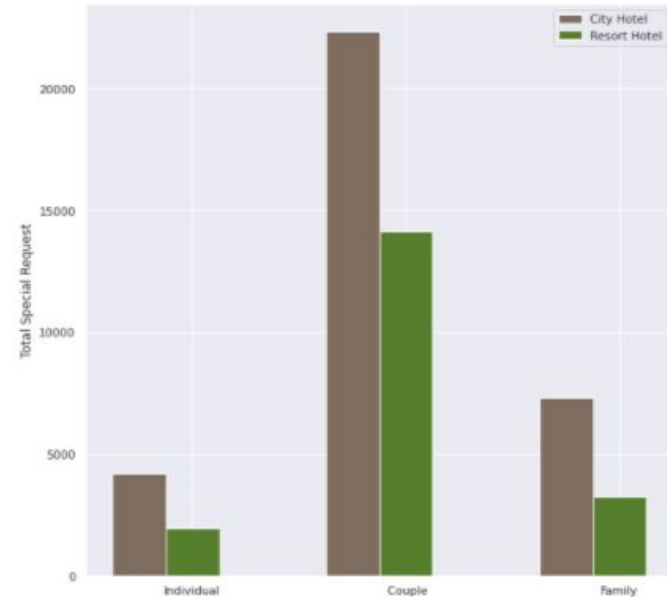
Fun fact: School summer breaks in Portugal are between mid-June and mid-September

Facilitator/Owner: Who does the booking?

Break-up of distribution channels

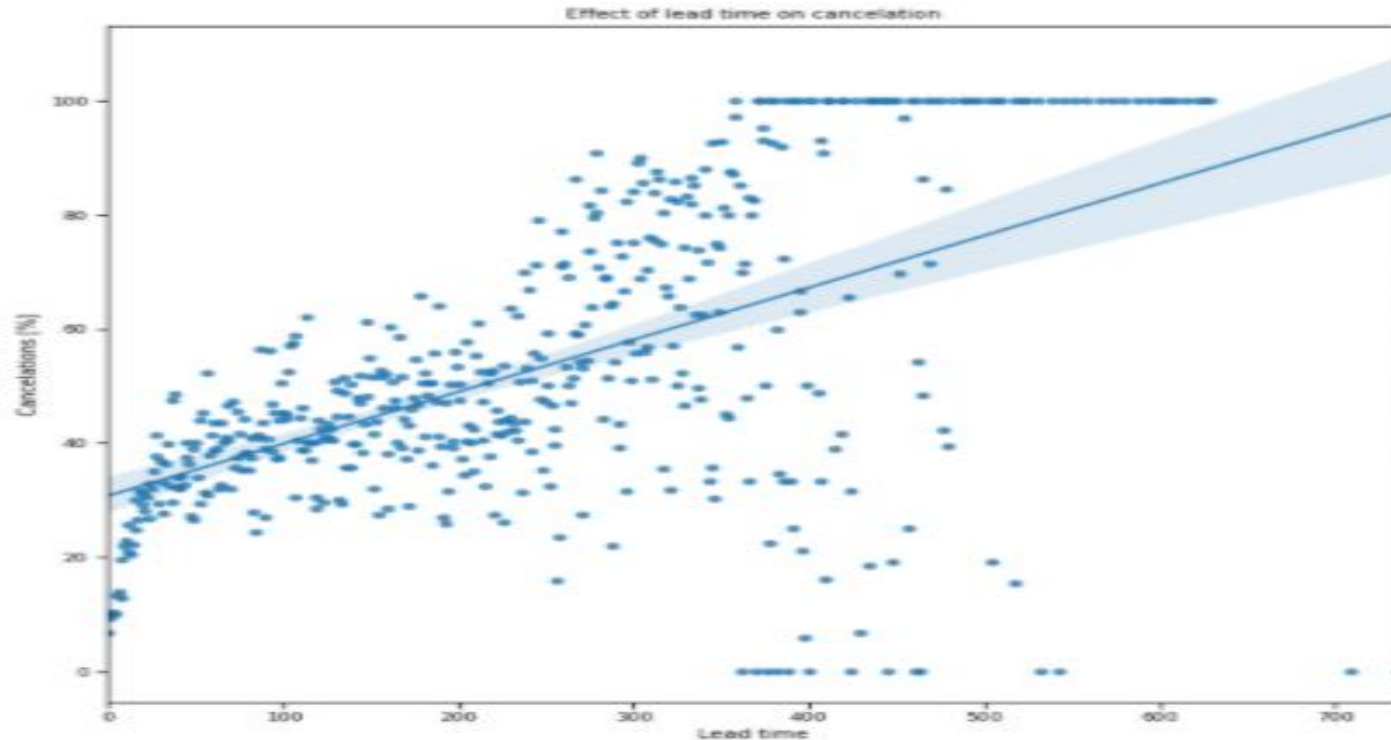


Types of bookings during 2015-2017



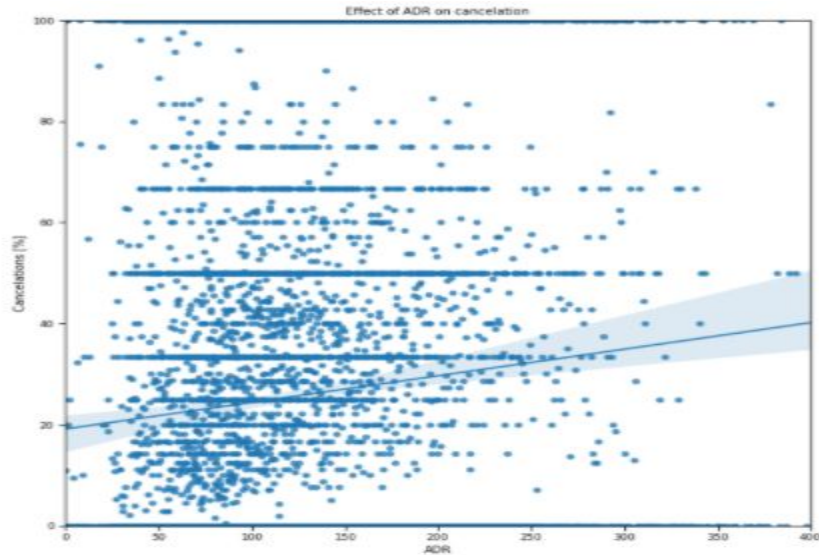
Owner: What impacts cancellations?

Effect of lead time on cancellations

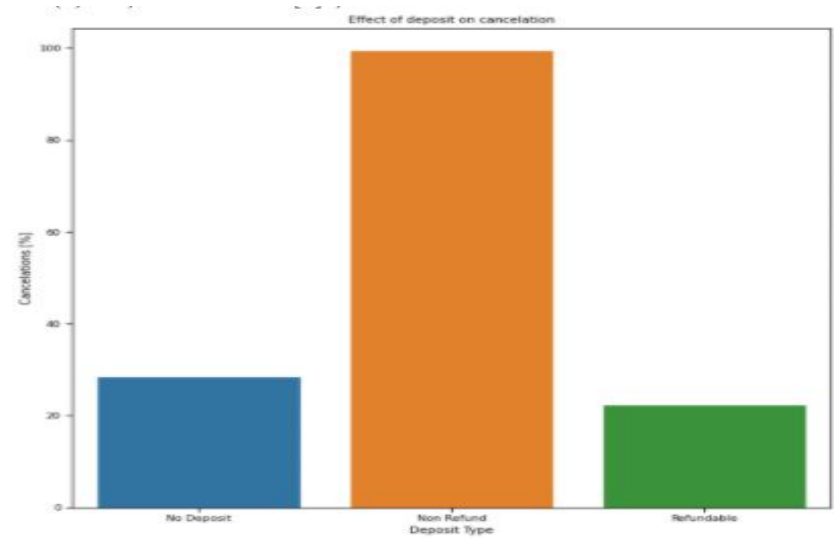


Owner: What impacts cancellations?

Effect of ADR on cancellations



Effect of deposit type on cancellations-



Challenges

1. Time taken to articulate the problem statements
2. Room upgrade analysis
3. Consideration of data subsets
4. Number of cancellations for bookings is the highest (~95%)

Conclusions

1. **Worst time to head to Portugal: July and August**
2. **What categories should facilitators/owners focus on: The highest number of bookings are done by couples for both segments**
3. **A leading indicator of cancellations is high lead time**

Q & A