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### **BUSINESS PROBLEM**

In the past few years, both City Hotels and Resort Hotels have faced a significant surge in cancellation rates, leading to several challenges such as reduced revenues and suboptimal hotel room utilization. Thus, their main objective is to minimize these cancellation rates, thereby enhancing their revenue generation efficiency. This report aims to analyze hotel-booking cancellations while disregarding unrelated factors that do not influence their business and yearly revenue generation.



# **ASSUMPTIONS**

- a) The data used for analysis is not expected to be significantly affected by any unusual occurrences between 2015 and 2017.
- b) The dataset is current and pertinent, facilitating a streamlined analysis of potential strategies for hotels.
- c) The implementation of recommended techniques is not anticipated to have any drawbacks or adverse effects on the hotel.
- d) The hotels under study have not currently adopted the suggested solutions.
- e) The most influential factor impacting revenue generation is the rate of booking cancellations.
- f) Cancellations lead to unoccupied rooms for the duration of the initial booking.
- g) Clients typically make hotel reservations in the same year they end up canceling them.

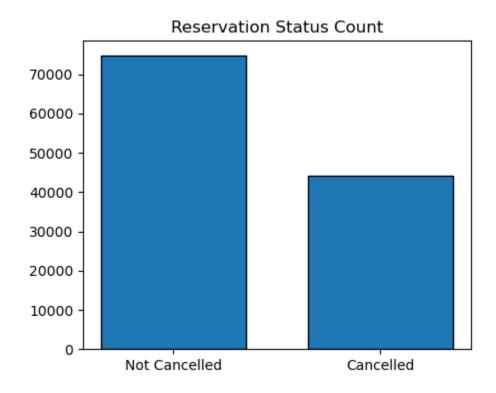
# **RESEARCH QUESTIONS**

- a) What are the variables that affect hotel reservation cancellations?
- b) How can we make hotel reservations cancellations better?
- c) How will hotels be assisted in making pricing and promotional decisions?

# **HYPOTHESIS**

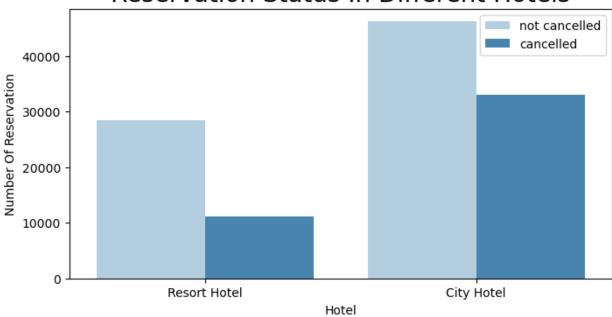
- a) More cancellations occur when prices are higher.
- b) When there is a longer waiting list, customers tend to cancel more frequently.
- c) The majority of clients are coming from offline travel agents to make their reservations.

## **ANALYSIS AND FINDINGS**

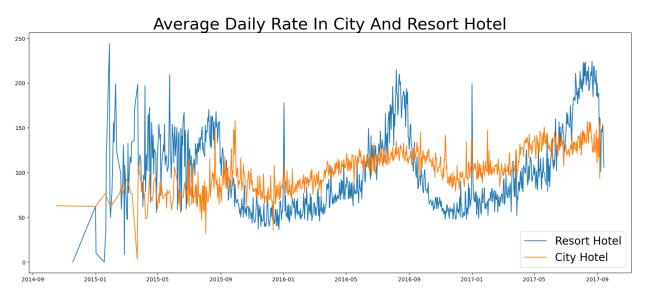


According to the bar graph, a substantial percentage of reservations are yet to be cancelled. The data reveals that 37% of clients decided to cancel their bookings, thereby affecting the hotel's revenue.

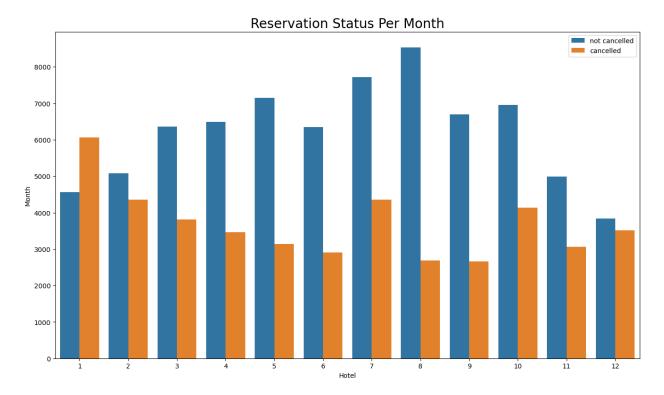
### Reservation Status In Different Hotels



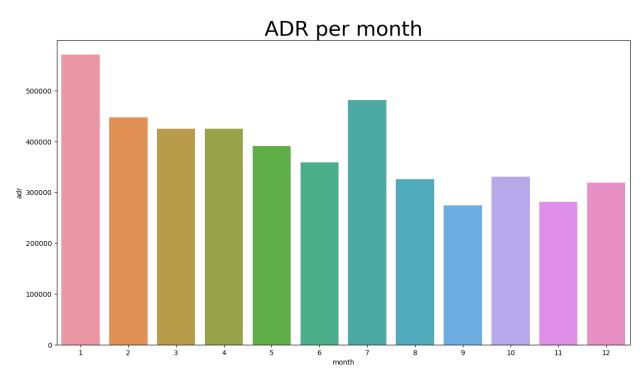
The data indicates that city hotels receive a higher influx of bookings than resort hotels. This pattern suggests that resort accommodations might carry a higher price tag compared to city-based options.



Based on the line graph data, we can observe that the average daily rate for city hotels fluctuates, sometimes dipping below resort hotel rates. Weekends and holidays emerge as periods when resort hotel rates are likely to experience an increase.

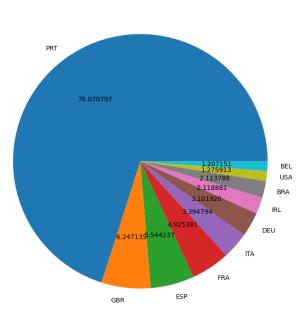


With the help of the grouped bar graph, we can investigate the distribution of reservation levels according to their status throughout the year. It is evident that August witnesses the highest figures for both confirmed and cancelled reservations, while January experiences the highest count of cancellations.



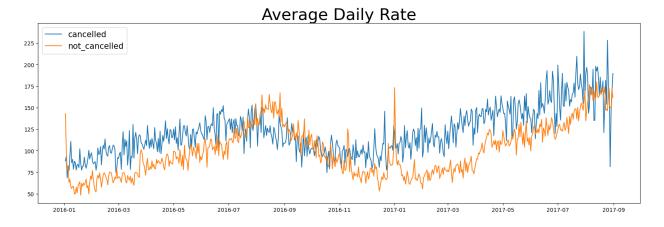
Based on the information presented in the bar graph, it is evident that there exists a direct link between accommodation prices and cancellation rates. Higher prices correspond to a higher likelihood of cancellations, whereas lower prices are associated with a reduced frequency of cancellations. Thus, accommodation cost appears to be a primary factor influencing cancellations.

Among all the countries, Portugal stands out as the leader in terms of reservation cancellations, registering the highest number of cancellations.



Top 10 contries with reservation canceled

When examining the source of hotel guests and their reservation methods, the data reveals that approximately 46% of clients come through online travel agencies, while around 27% arrive as part of groups. Additionally, a mere 4% of clients opt to book hotels directly by visiting them in person.



Observing the graph, one can discern that reservations experience a higher rate of cancellation when the average daily rate is raised. This supports the analysis made earlier, demonstrating a strong connection between elevated pricing and a surge in reservation cancellations.

#### **SUGGESTIONS**

- a) With cancellation rates showing an upward trend alongside increasing prices, hotels can take proactive steps to counter this by optimizing their pricing strategies. Adopting location-based pricing and offering customer discounts are viable solutions to minimize the incidence of reservation cancellations.
- b) The resort hotel exhibits a higher ratio of cancellations to non-cancellations compared to city hotels. Consequently, offering reasonable discounts on room prices during weekends or holidays would be a prudent step for hotels to consider.
- c) Considering January's peak cancellation rate, hotels have an opportunity to boost their revenue by launching targeted marketing campaigns with a reasonable investment.
- d) By prioritizing service quality improvement, hotels in Portugal can effectively lower their cancellation rates and create a more satisfying stay for their guests.