

# Hotel Reservation Data Analysis

## **Business Problem:**

In recent years, City Hotels and Resort Hotels struggle with high cancellation rates, which negatively impacted their revenue and efficiency. As a result, hotels have several issues, such as declining revenue due to vacant rooms and declining hotel room utilization. And it's become their primary goal. This report aims to provide a thorough analysis of hotel booking cancellations and other factors that can affect their business and annual revenue generation. By providing professional advice and recommendations to tackle the problem of high cancellation rates, both City Hotels and Resort Hotels can increase revenue and efficiency, and ensure better utilization of their hotel rooms.

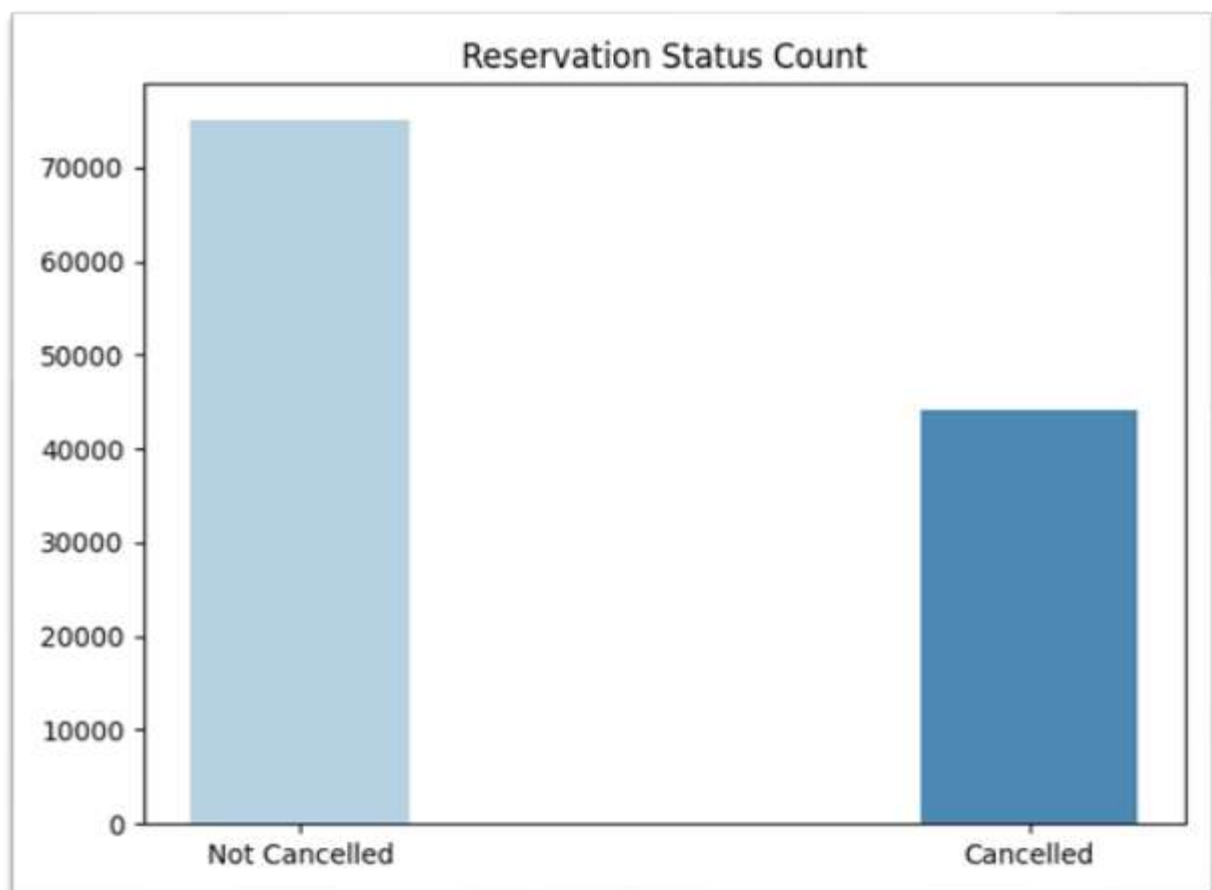
## **Assumptions:**

1. Unusual occurrences between 2015 and 2017 will not have a substantial impact on the data used.
2. The information used in this report is current and relevant for analysis.
3. There are no unanticipated negative consequences to the hotels implementing the recommended solutions.
4. The hotels are not currently using any of the suggested solutions.
5. Booking cancellations are the biggest factor affecting the effectiveness of revenue generation.
6. Cancellations result in vacant rooms for the duration of the booking.
7. Clients make hotel reservations and cancellations in the same year.

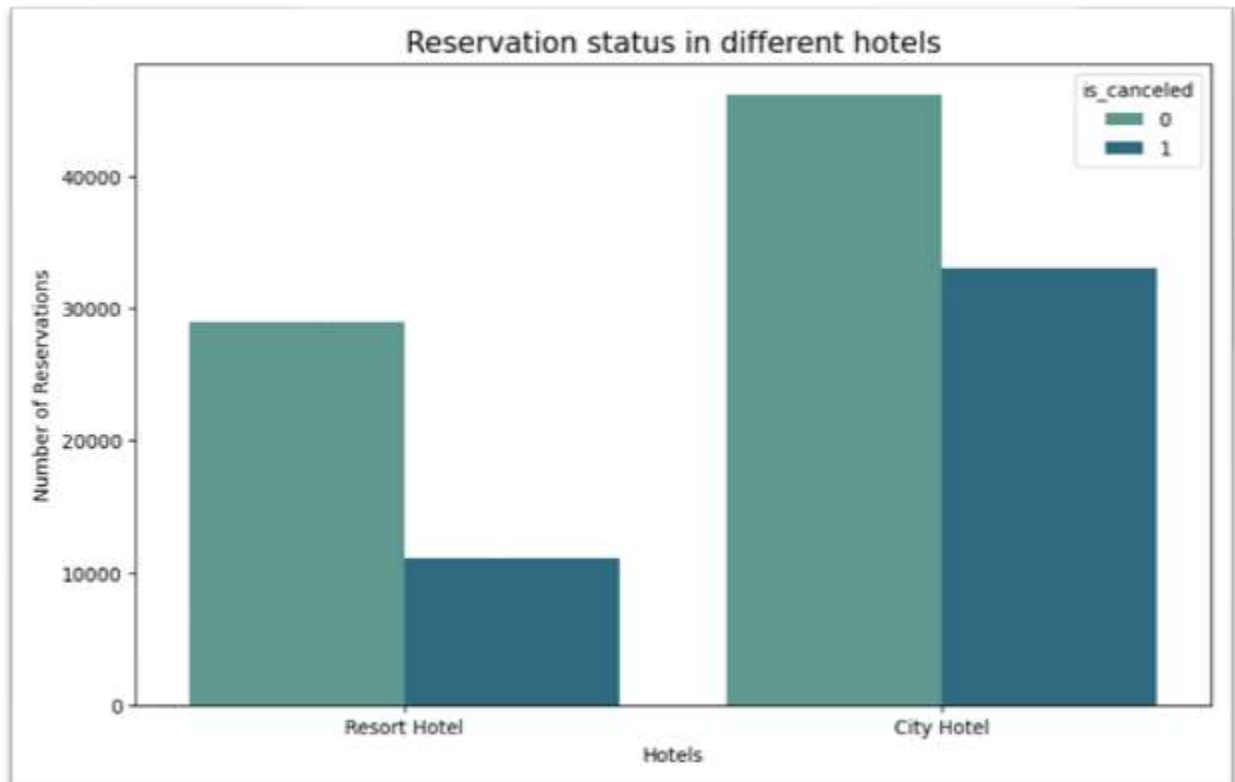
## Research Questions:

1. What are the variables that affect hotel reservation cancellations?
2. How can hotel reservation cancellations be reduced?
3. How can hotels make informed pricing and promotional decisions to increase revenue?

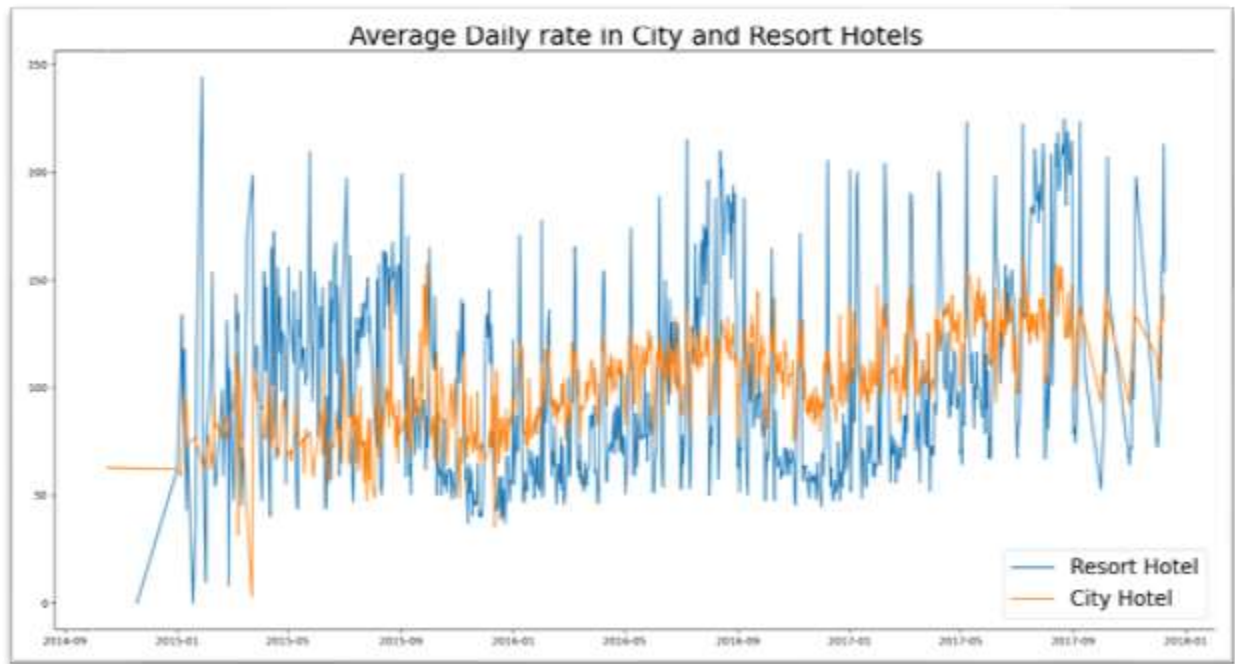
## Findings and Analysis:



Based on the data analysis conducted, it was found that the hotel reservation cancellation rate is 37.04%. This indicates that approximately one-third of the reservations made were cancelled by the customers. This finding highlights the need for hotels to carefully assess and manage their booking policies and procedures to minimize cancellations and optimize revenue generation.

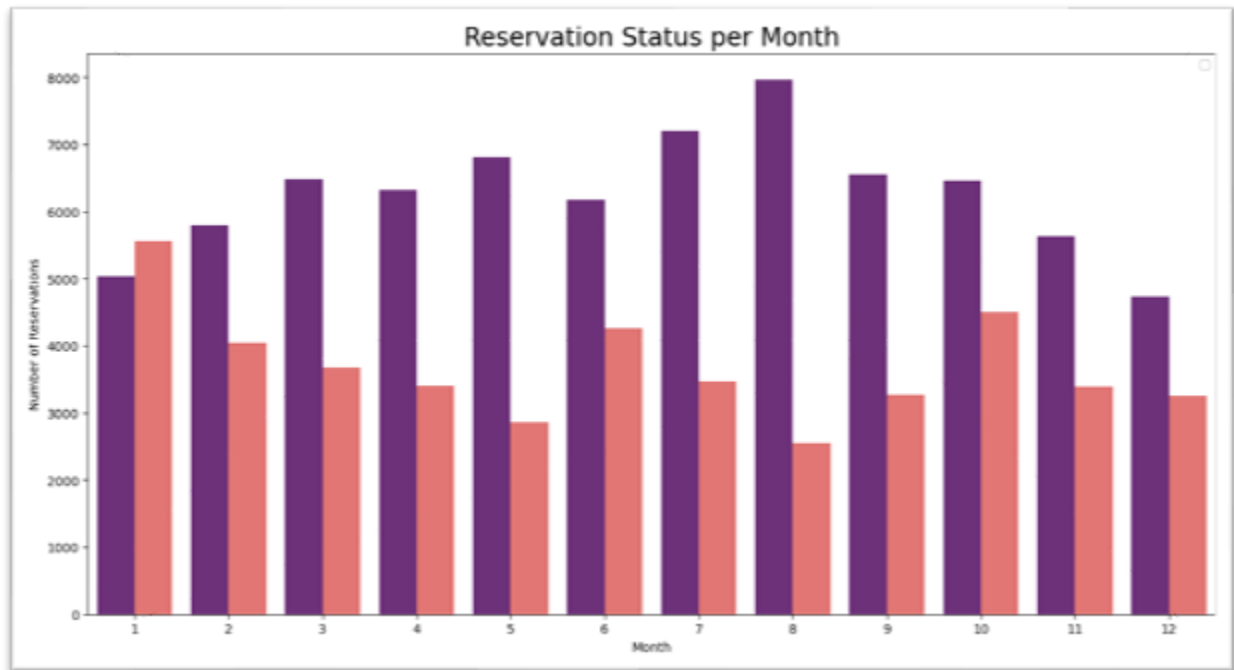


The analysis revealed a notable difference in the distribution of reservations between resort hotels and city hotels, with resort hotels accounting for a higher proportion of reservations compared to city hotels. This finding underscores the significance of understanding the varying demand patterns for hotel accommodations in different locations and tailoring the marketing and operational strategies accordingly.



The data analysis reveals a distinct pattern of ADR fluctuation for the company, with an increase in ADR observed during weekends and a decrease during off-season periods. This trend suggests a higher demand for hotel accommodations during weekends, leading to a rise in ADR as the company is able to charge a premium rate for the limited availability of rooms. Conversely, during off-season periods when demand is low, the company experiences a decline in ADR due to the need to lower prices to attract customers.

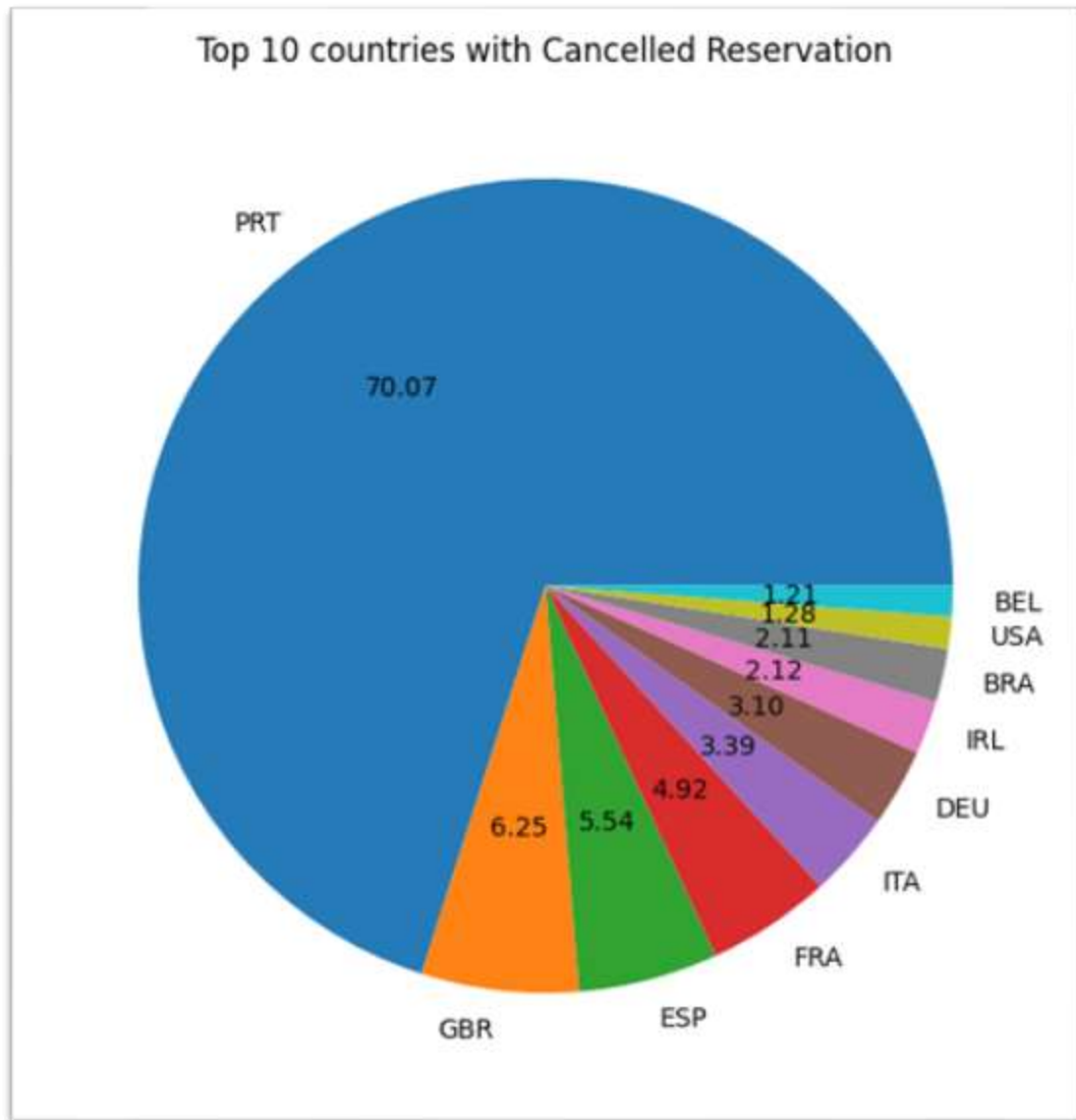
This trend has significant implications for the company's revenue management strategy, as it highlights the importance of effectively managing the pricing and availability of rooms to optimize revenue during high-demand periods and maintain occupancy levels during low-demand periods. The company may consider implementing dynamic pricing strategies and promotional offers to maximize revenue during weekends and explore alternative marketing and pricing strategies to boost demand during off-season periods.



The image illustrates the monthly distribution of reservations made in hotels, showcasing the fluctuation of demand across different months.

This finding has significant implications for the company's revenue management strategy, as it highlights the need to effectively manage the availability and pricing of rooms in response to the varying demand patterns throughout the year. The company may consider implementing dynamic pricing strategies, promotional offers, and seasonal packages to optimize revenue during high-demand months and maintain occupancy levels during low-demand months.

Moreover, the analysis of the month-wise reservation data may help the company identify trends and seasonality patterns in the demand for hotel accommodations, enabling them to make informed decisions on resource allocation, marketing, and operations.



The pie chart presents the percentage-wise distribution of reservations cancelled in the top 10 countries, indicating the level of cancellations as a proportion of the total reservations made in each country. The analysis reveals that 70.07% of reservations made in Portugal were cancelled, making it the country with the highest percentage of cancellations in the top 10. In contrast, 1.21% of reservations made in Belgium were cancelled, making it the country with the lowest percentage of cancellations in the top 10.