

Hotel Booking Analysis Report

Business Problem:

Over recent years, both City Hotels and Resort Hotels have experienced high cancellation rates. These cancellations have led to reduced revenue and underutilization of hotel rooms. Therefore, minimizing booking cancellations has become a top priority for both hotel types. This report aims to analyze the cancellation patterns and provide actionable insights to improve hotel efficiency and profitability.

The focus is on understanding the factors behind hotel booking cancellations and other elements that influence the overall business and annual revenue generation.

Analysis Project Steps:

1. Define the problem statement
2. Select relevant data for analysis
3. Perform data cleaning and exploration
4. Analyze the data to extract insights
5. Visualize the findings in dashboards and reports

Assumptions:

1. No unusual occurrences between 2015 and 2017 will have a substantial impact the data used.
2. The information is still current and can be used to analyze a hotel's possible plans in an efficient manner.
3. There are no unanticipated negatives to the hotel employing any advised technique.
4. The hotels are not currently using any of the suggested solutions.
5. The biggest factor affecting the effectiveness of earning income is booking cancellations.
6. Cancellations result in vacant rooms for the booked length of time.

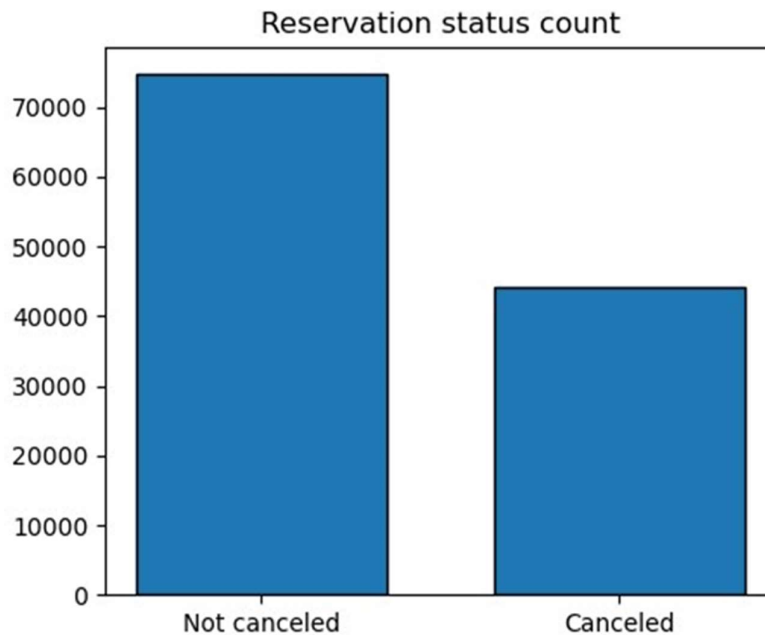
Research Questions:

1. What factors lead to hotel booking cancellations?
2. How can we reduce the number of cancellations?
3. How can this analysis help hotels with pricing and promotional strategies?

Hypothesis:

1. More cancellations occur when prices are higher.
2. When there is a longer waiting list, customers tend to cancel more frequently .
3. The majority of clients are coming form offline travel agents to make their reservations.

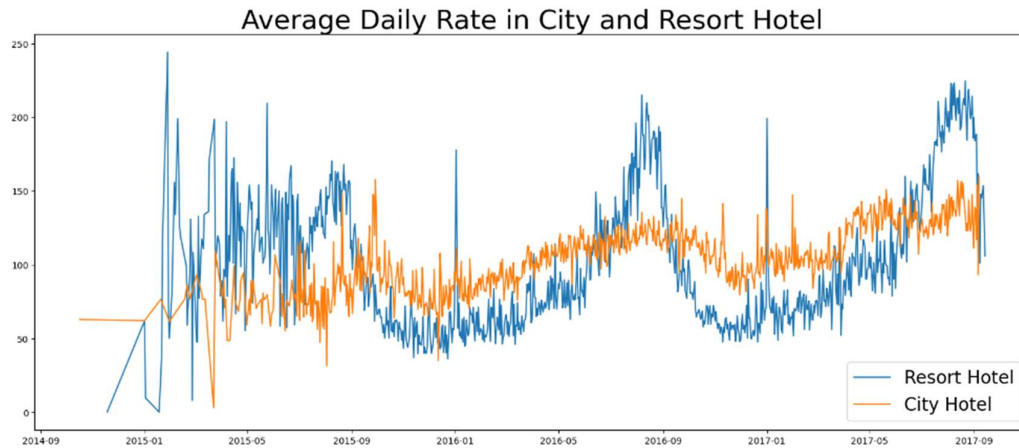
Analysis and Findings



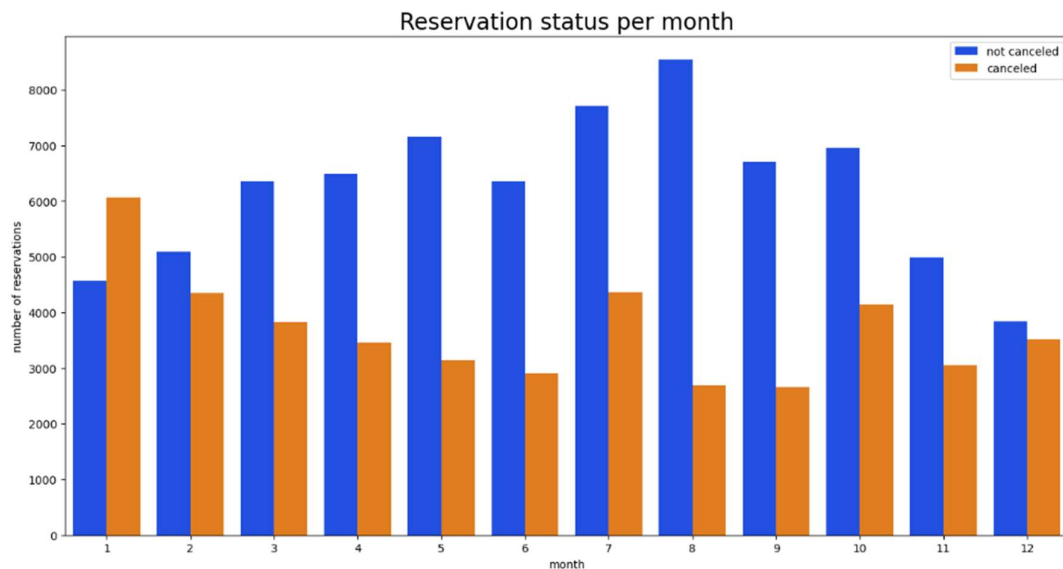
The accompanying bar graph shows the percentage of reservations that are canceled and those that are not. It is obvious that there are still a significant number of reservations that have not been canceled. There are still 37% of clients who canceled their reservation, which has a significant impact on the hotel's earnings.



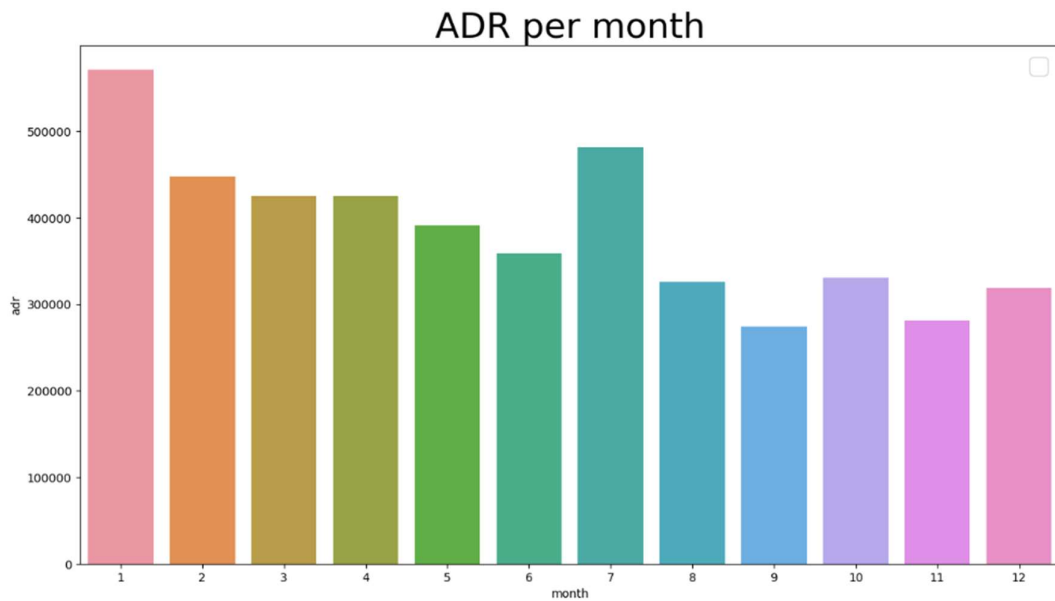
In comparison to resort hotels, city hotels have more bookings. It's possible that resort hotels are more expensive than those in cities.



The line graph above shows that, on certain days, the average daily rate for a city hotel is less than that of a resort hotel, and on other days, it is even less. It goes without saying that weekends and holidays may see a rise in resort hotel rates.



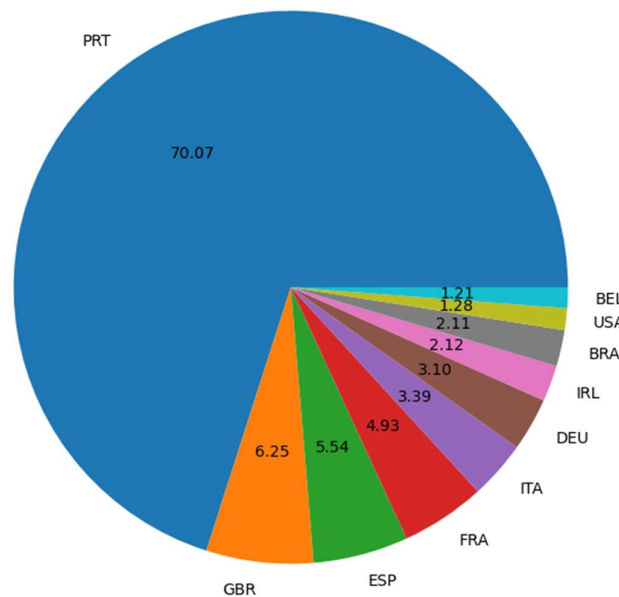
We have developed the grouped bar graph to analyze the months with the highest and lowest reservation levels according to reservation status. As can be seen, both the number of confirmed reservations and the number of canceled reservations are largest in the month of August. Whereas January is the month with the most canceled reservations.



This bar graph demonstrates that cancellations are most common when prices are greatest and are least common when they are lowest. Therefore, the cost of the accommodation is solely for the cancellation.

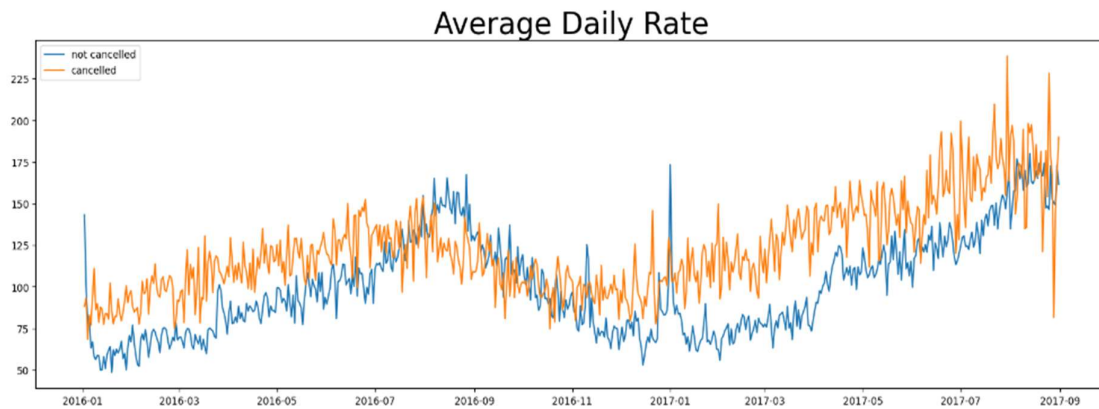
Now, let's see which country has the highest reservation canceled. The top country is Portugal with the highest number of cancellations.

Top 10 countries with reservation canceled



Let's check the area where guests are visiting the hotels and making reservations. Is it coming Direct or Groups, Online or Offline Travel Agents? Around 46% of the clients come from online travel

agencies, whereas 27% come from groups. Only 4% of clients books hotels directly by visiting them and making reservations.



As seen in the graph, reservations are canceled when the average daily rate is higher than when it is not canceled. It clearly proves all the above analysis, that the higher price leads to higher cancellation.

Suggestions

1. Cancellation rates rise as the price does. In order to prevent cancellations of reservations, hotels could work on their pricing strategies and try to lower the rates for specific hotels based on location. They can also provide some discounts to the customers.
2. As the ratio of the cancellation and not cancellation of the resort hotel is higher in the resort hotel than the city hotels. So the hotels should provide a reasonable discount on the room prices on weekends or on holidays.
3. In the month of January, hotels can start campaigns or marketing with a reasonable amount to increase their revenue as the cancellation is highest in this month.
4. They can also increase the quality of their hotels and their services mainly in Portugal to reduce the cancellation rate.