

Data Analysis Report - Hotel Booking

Business Problem

In recent years, City hotel and Resort Hotel have seen high cancellation rates. Each hotel is now dealing with a number of issues as a result including fewer revenues and less than ideal hotel room usage. Consequently, lowering cancellation rates is both hotels' primary goal in order to increase their efficiency on generating revenue, and for us to offer business advice to address their problem.

The analysis of hotel booking cancellations as well as other factors that have no bearing on their business and yearly revenue generation are the main topic of this report.



Assumptions

1. No unusual occurrences between 2015 and 2017 will have a substantial impact on 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 using any suggested solutions as of now.

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.
7. Clients make hotel reservations the same year they make cancellations.

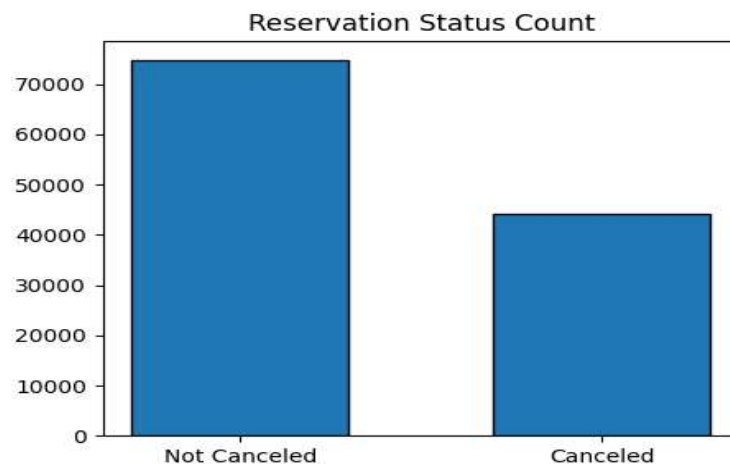
Research Questions

1. What are the variables that affect hotel reservation cancellations?
2. How can we make hotel reservations cancellations better?
3. How will hotels be assisted in making pricing and promotional decisions?

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 from offline travel agents to make their reservations.

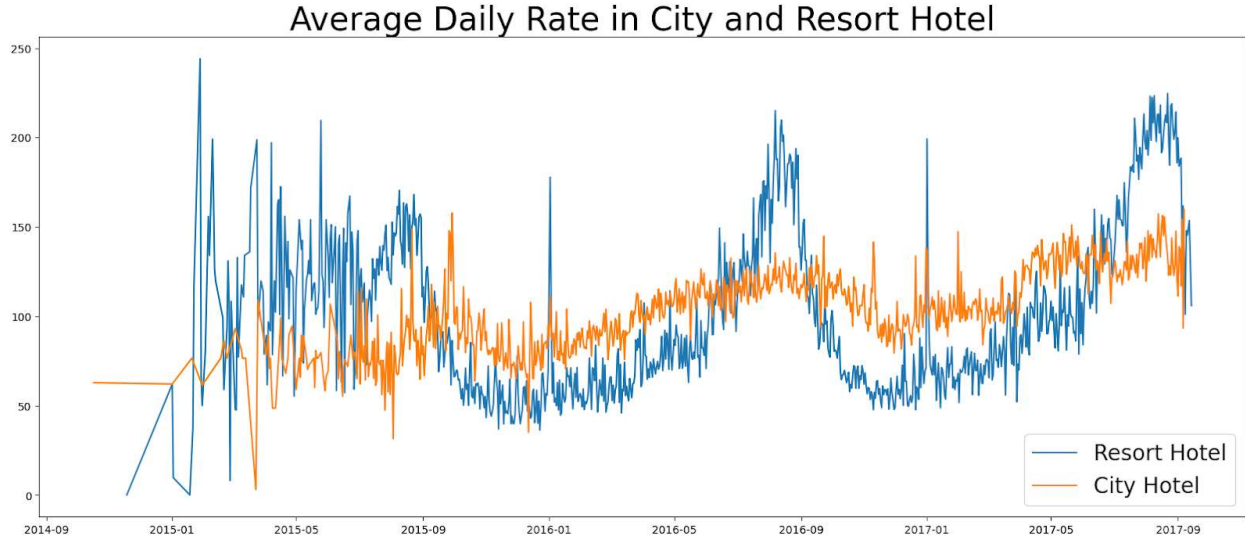
Analysis and Findings



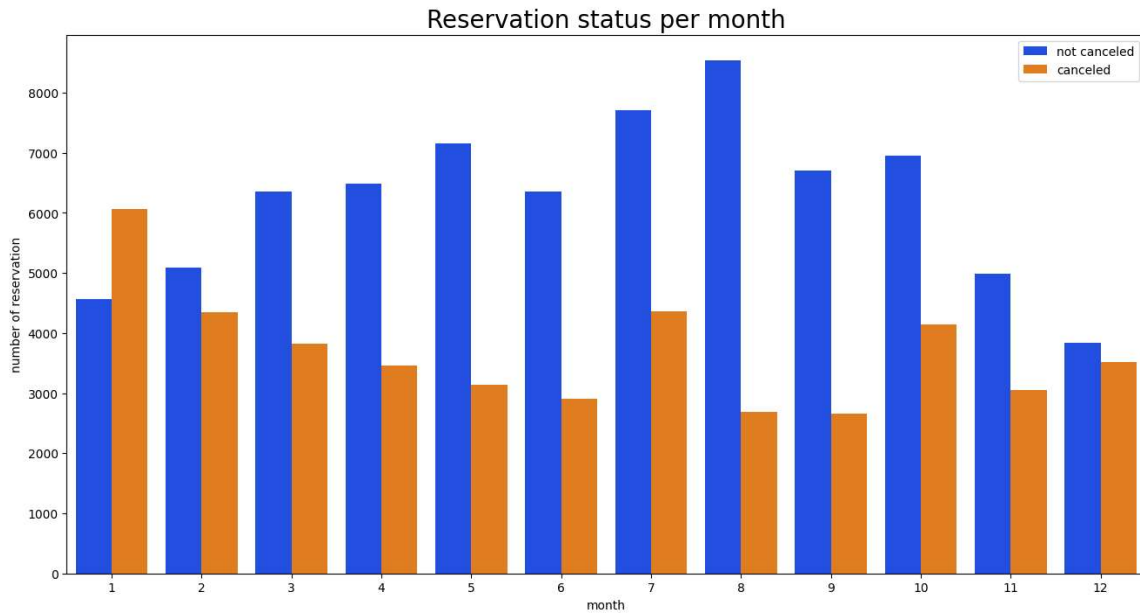
The bar graph reveals the reservation cancellation rate, indicating a substantial portion of reservations that remain unaffected. However, the data highlights a significant 37% cancellation rate, exerting a notable impact on the hotel's earnings. Efforts should be directed towards minimizing cancellations through flexible policies and enhancing the guest experience. Analyzing cancellation patterns can aid in tailoring strategies to mitigate revenue loss and improve overall financial performance.



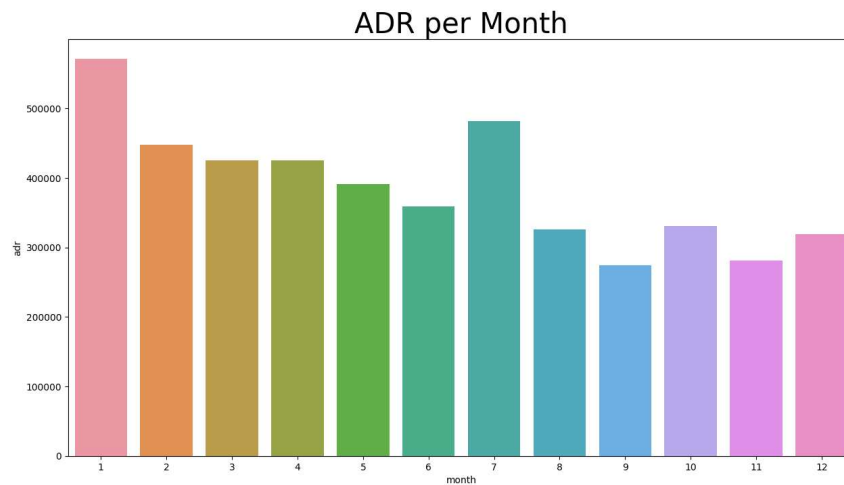
In comparison to resort hotels, city hotels have more bookings. It is possible that resort hotels are more expensive than those in cities.



The graph provides clear evidence of the fluctuating average daily rates between city hotels and resort hotels. Interestingly, there are days when city hotel rates are lower than those of resorts, and on other occasions, the difference becomes even more pronounced. Notably, weekends and holidays typically witness a surge in resort hotel rates, reflecting the influence of increased demand during leisure periods.



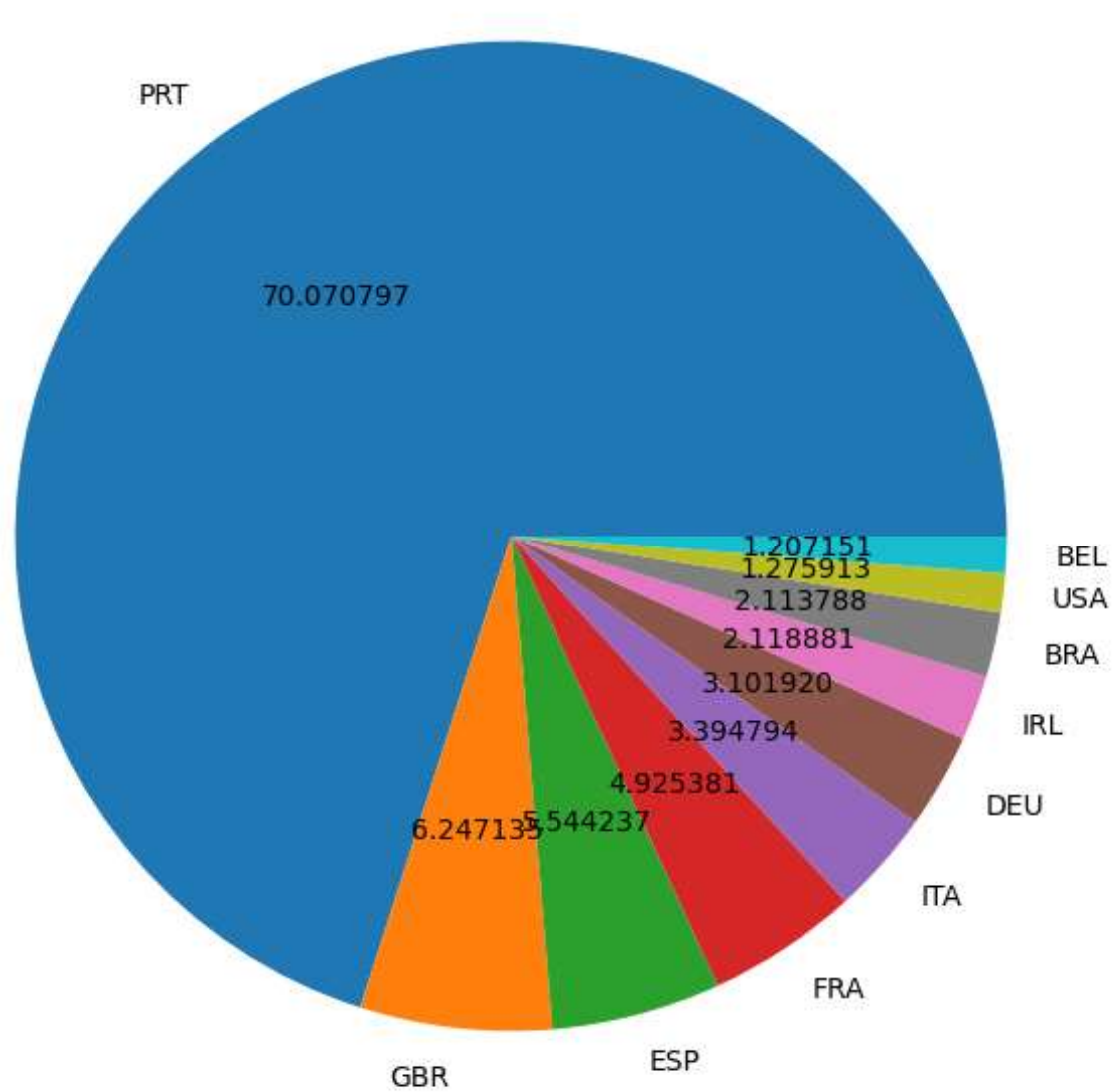
We have developed that grouped bar graph to analyze the months with the highest and lowest reservation levels according to the reservation status. As can be seen, both the number of confirmed reservations and the number of canceled reservations are largest in the month of August whereas January is the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



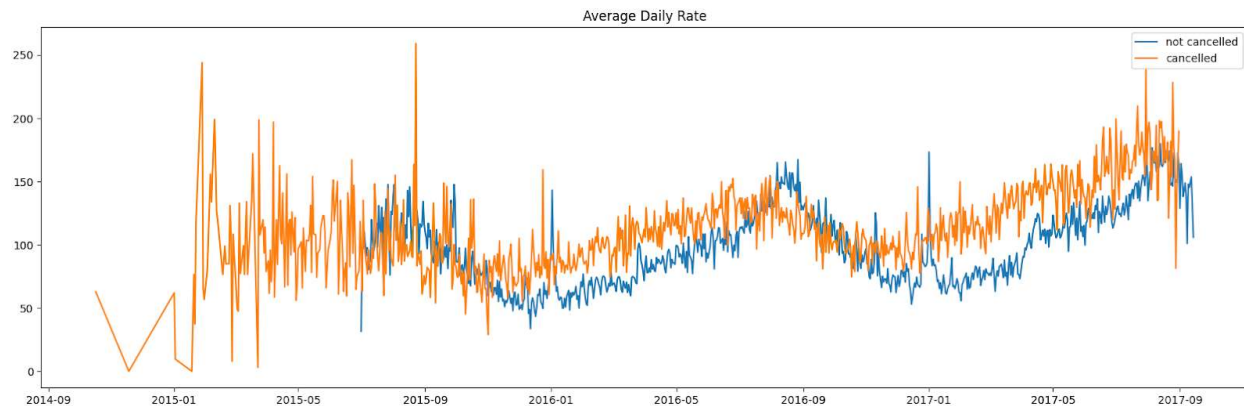
This bar graph demonstrates that cancellations are the most common when prices are greatest and are least common when they are lowest. Therefore, the cost of the accommodation is solely responsible for the cancellation.

Now let's examine the data to determine which country has experienced the highest number of reservation cancellations. Notably, Portugal emerges as the frontrunner with the highest count of cancellations compared to other countries. This insight sheds light on the specific challenges faced by Portugal in terms of reservation stability within its hospitality industry.

Top 10 countries with reservation cancelled



Let's check the area from where guests are visiting the hotels and making reservations. Is it coming from direct or groups, online or offline Travel agents? Around 46% of the clients come from online travel agencies, where 27% come from groups. Only 4% of clients book 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 provides 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 the reservations, hotels could work on their pricing strategies and try to lower the rates for specific hotels based on locations. They also provide some discounts to the customers too.
2. As the ratio of the cancellation and not cancellation of the resort hotel is higher than the city hotel. So hotels should provide a reasonable discount on the room prices on weekends and holidays.
3. In the month of January, the hotels can start campaigns or marketing with reasonable amounts to increase their revenue as the cancellation is the highest this month.
4. They can also increase the quality of their hotels and their services mainly in Portugal to reduce the cancellation rate.