

Data Analysis – Hotel Bookings

Business Problem

The City Hotel and Resort Hotel have had a lot of cancellations in the past few years. This has resulted in a number of problems for each hotel, such as lower revenues and less than optimal usage of hotel rooms. As a result, hotels' main objective is to reduce cancellation rates in order to boost their revenue-generating efficiency. We also provide comprehensive business assistance to handle this issue.

This report's primary subjects are an investigation of hotel booking cancellations and other unrelated issues that don't affect their business or annual revenue creation.

Assumptions

1. The data utilized won't be significantly impacted by any exceptional events that happened between 2015 and 2017.
2. The data is still up to date and can be effectively utilized to examine potential hotel ideas.
3. The hotel's use of any recommended technique has no unforeseen drawbacks.
4. As of right now, none of the recommended solutions are being used by the hotels.
5. 5. The largest element influencing how profitable it is to earn money is cancellations of reservations.
6. Rooms that are cancelled remain unoccupied for the duration of the reservation.
7. In the same year that they cancel, customers book hotels.

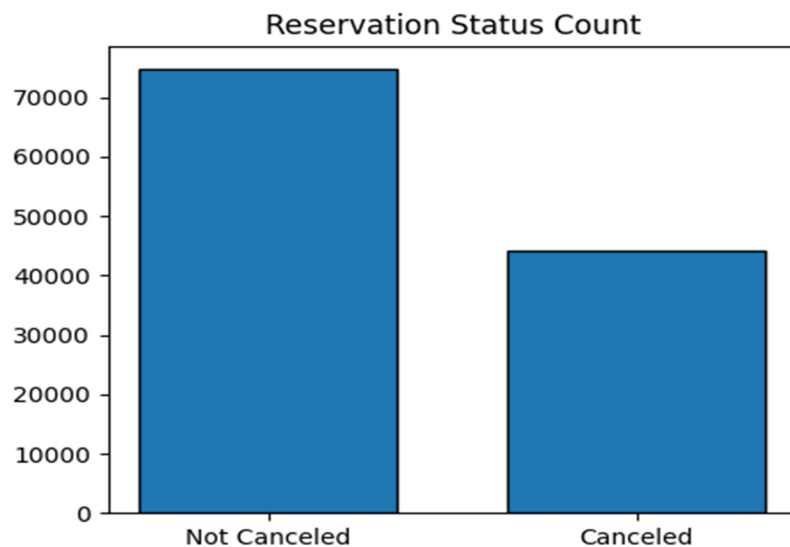
Research Question

1. What factors influence the cancelation of hotel reservations?
2. How can we improve the cancelation of hotel reservations?
3. How will hotels receive help in setting their prices and running promotions?

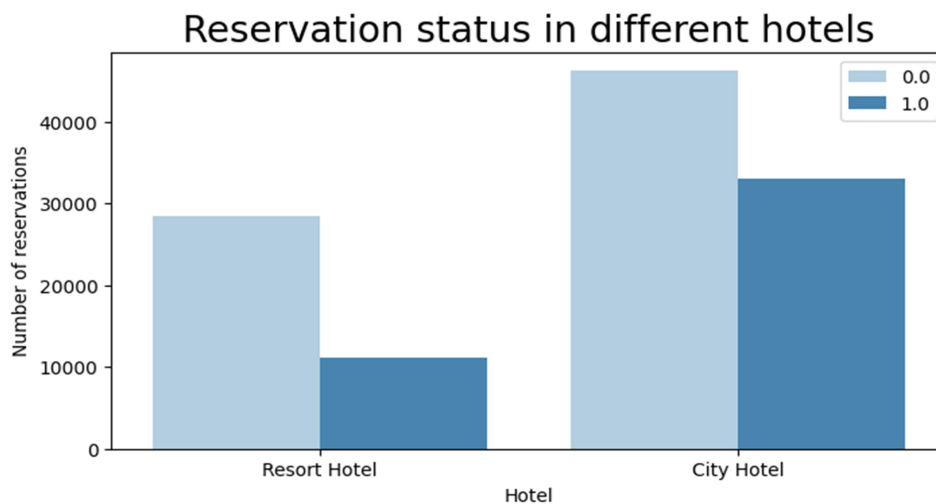
Hypothesis

1. Higher pricing lead to a higher number of cancellations.
2. Customers tend to cancel more frequently when there is a longer waiting list.
3. The bulk of customers make their arrangements through offline travel agencies.

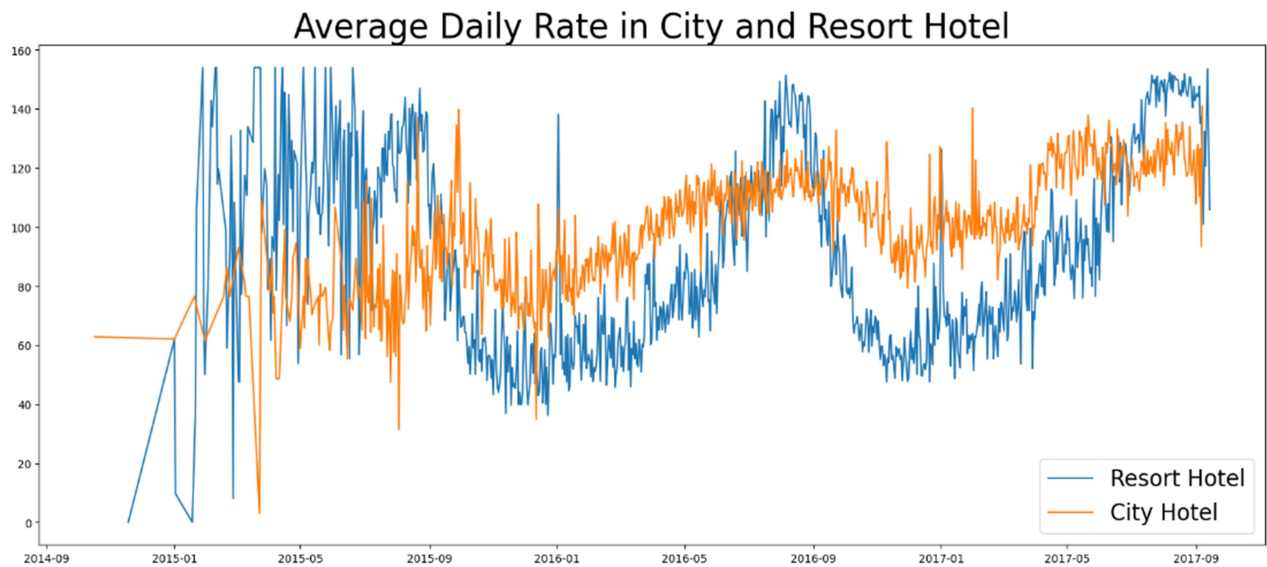
Analysis and Findings



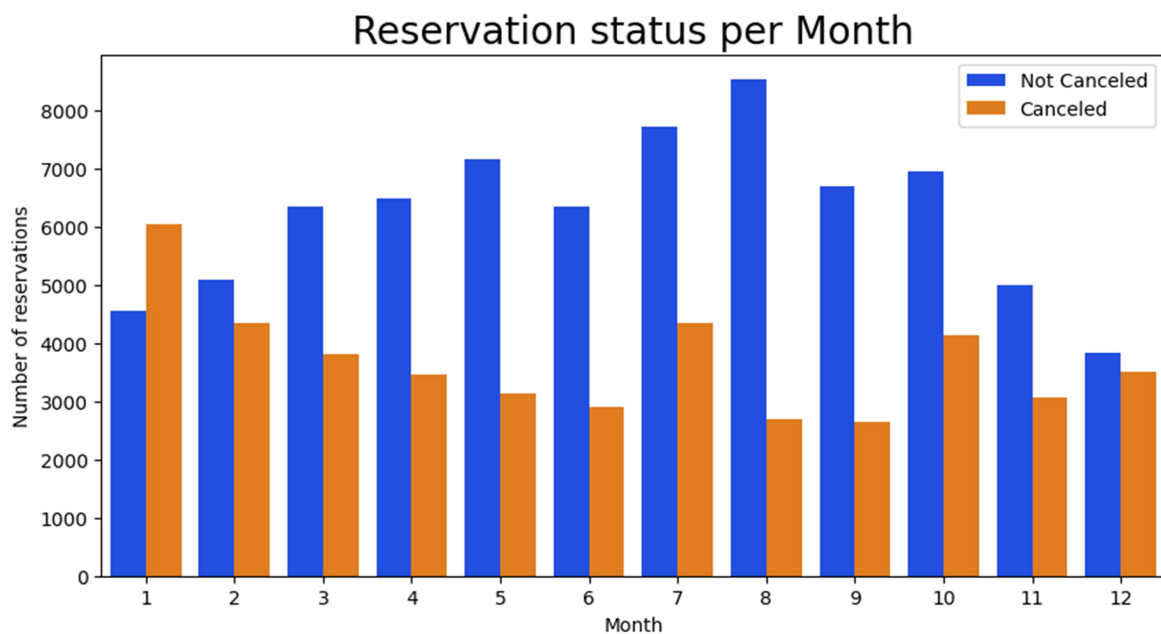
The percentage of canceled and non-canceled reservations is displayed in the bar graph that goes with it. It's clear that a sizable portion of reservations remain not canceled. 37% of customers still cancel their reservations, which has a big effect on the money that hotels make.



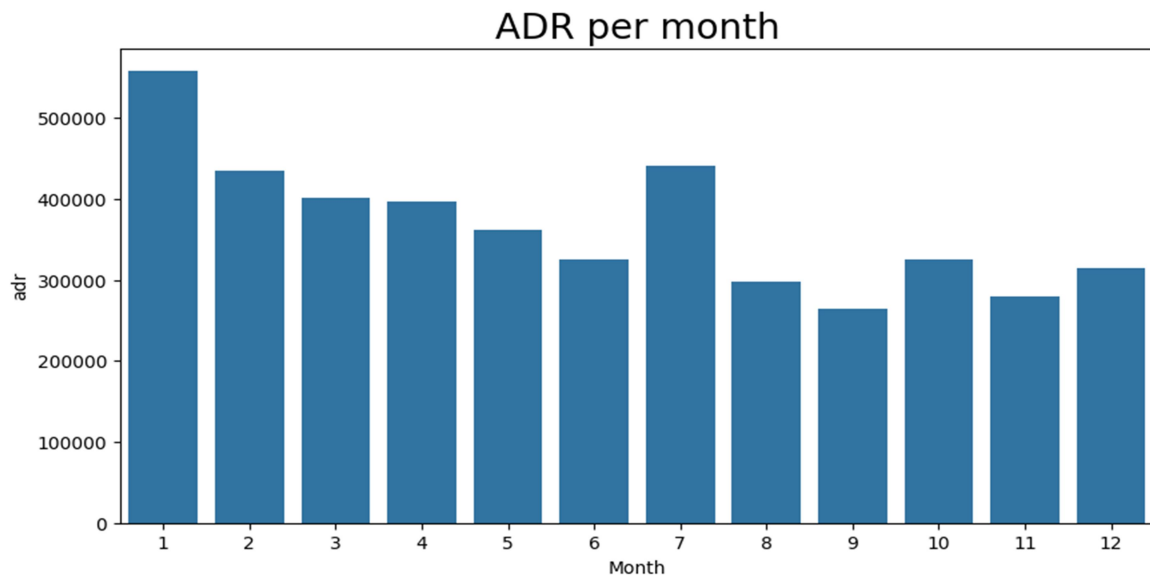
In comparison to resort hotels, city hotels have more bookings. It's possible that resort hotels are more expensive than those in cities.



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.



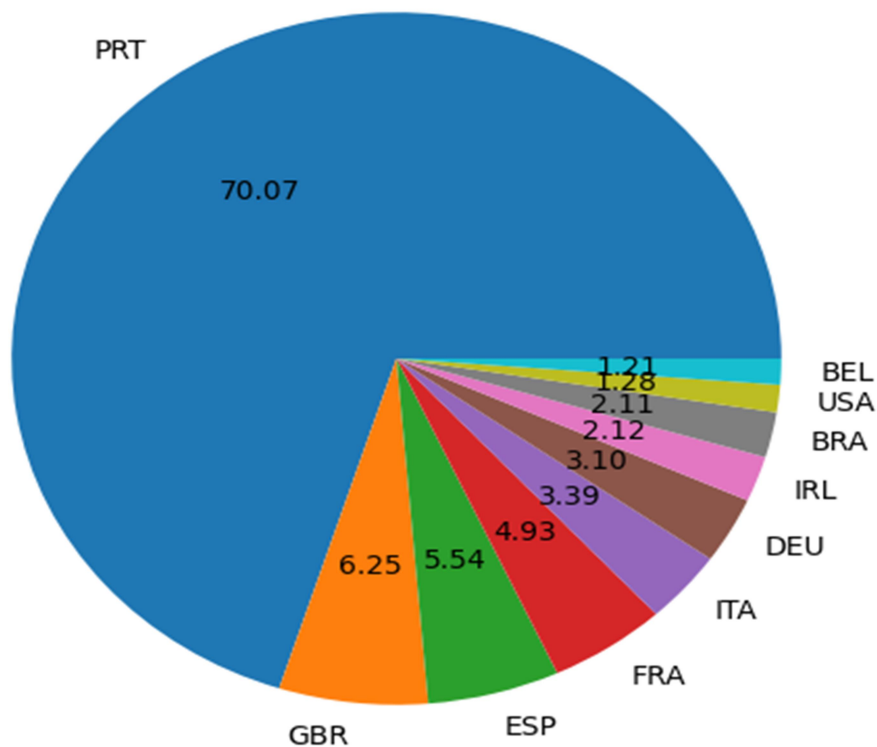
In order to examine the months with the highest and lowest reservation levels based on reservation status, we have created a grouped bar graph. It is evident that August has the highest number of confirmed reservations as well as the highest number of canceled reservations. On the other hand, January has the highest number of canceled reservations.



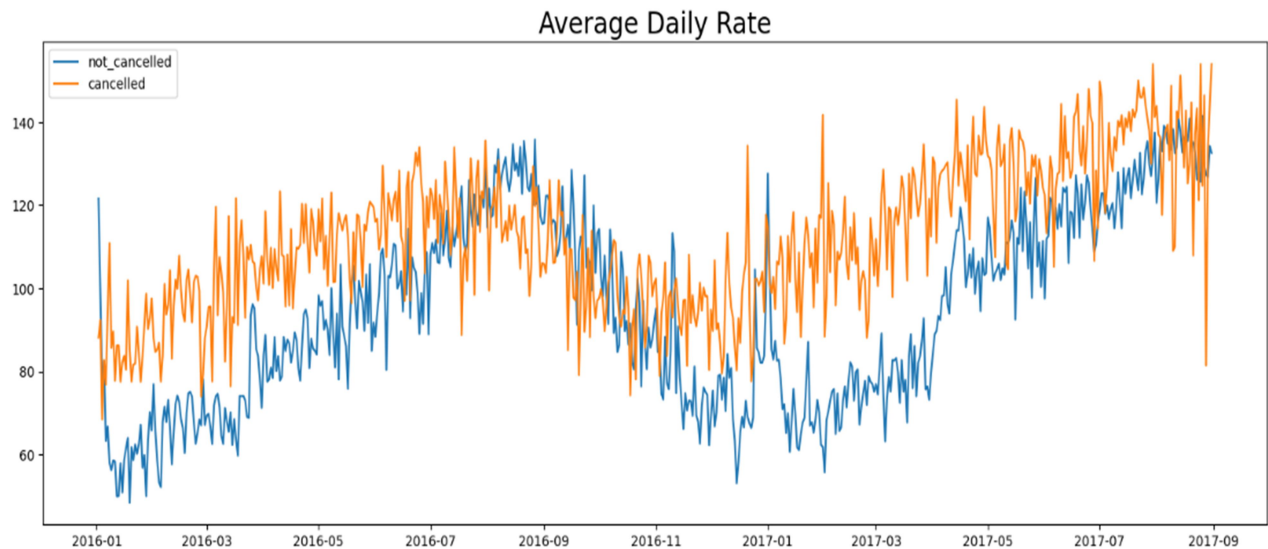
This bar graph shows that cancellations are most common during peak pricing and least common during off-peak pricing. For this reason, the only reason for the cancellation is the expense of the lodging.

Now, let's check which nation has the most cancelled reservations now. Portugal ranks first among the nations with the most cancellations.

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, whereas 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 proves all the above analysis that the higher price leads to higher cancellation.

Suggestion

1. As prices rise, cancellation rates also climb. Hotels should improve their pricing tactics and attempt to reduce the costs for particular hotels based on locations in order to prevent reservation cancellations. Additionally, they can provide their customers some discounts.
2. Because the ratio of cancellations to no cancellations at resort hotels is larger than that of city hotels. Therefore, during weekends or on holidays, the hotels ought to provide a fair room rate reduction.
3. Since cancellations are at their peak in January, hotels can begin campaigns or marketing with a fair budget to boost income.
4. They have the ability to raise the caliber of their hotels and their services mainly in Portugal to reduce the cancellation rate.