

Data analysis of Hotel Booking

Business problem:

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

Assumption

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

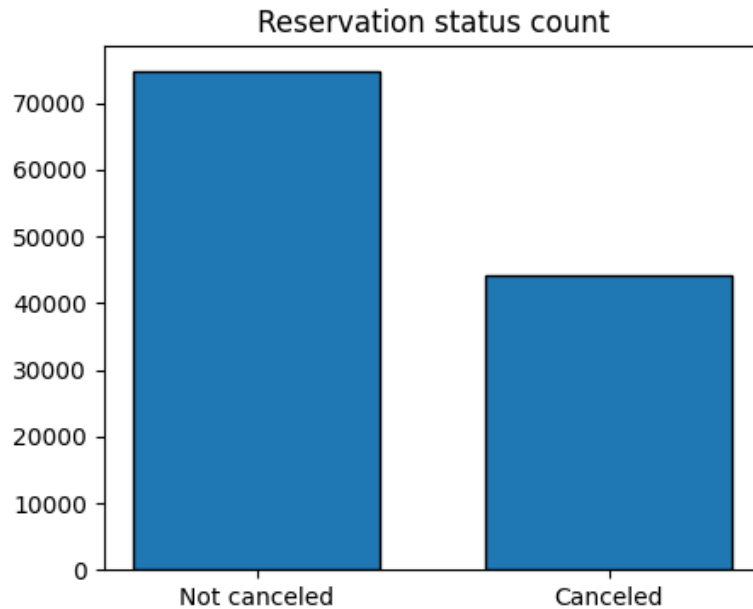
Research question

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?

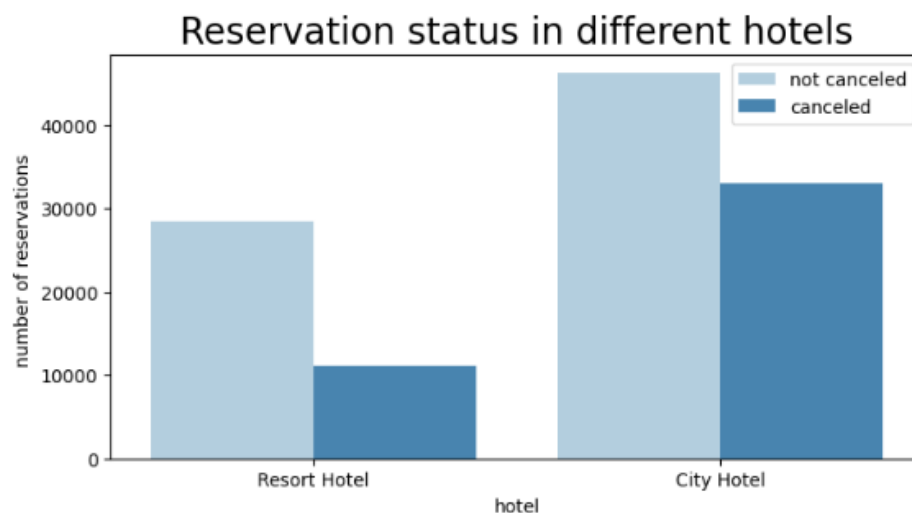
Hypothesis

1. More cancellations occur when prices are higher.
2. A longer waiting list correlates with an increased frequency of customer cancellations.
3. Most clients are booking their reservations through offline travel agents.

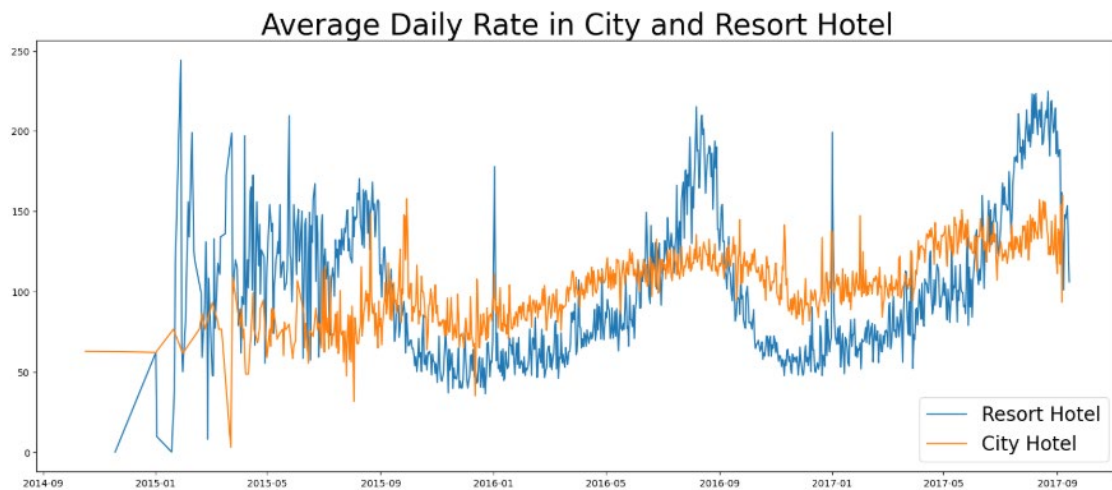
Analysis and Findings



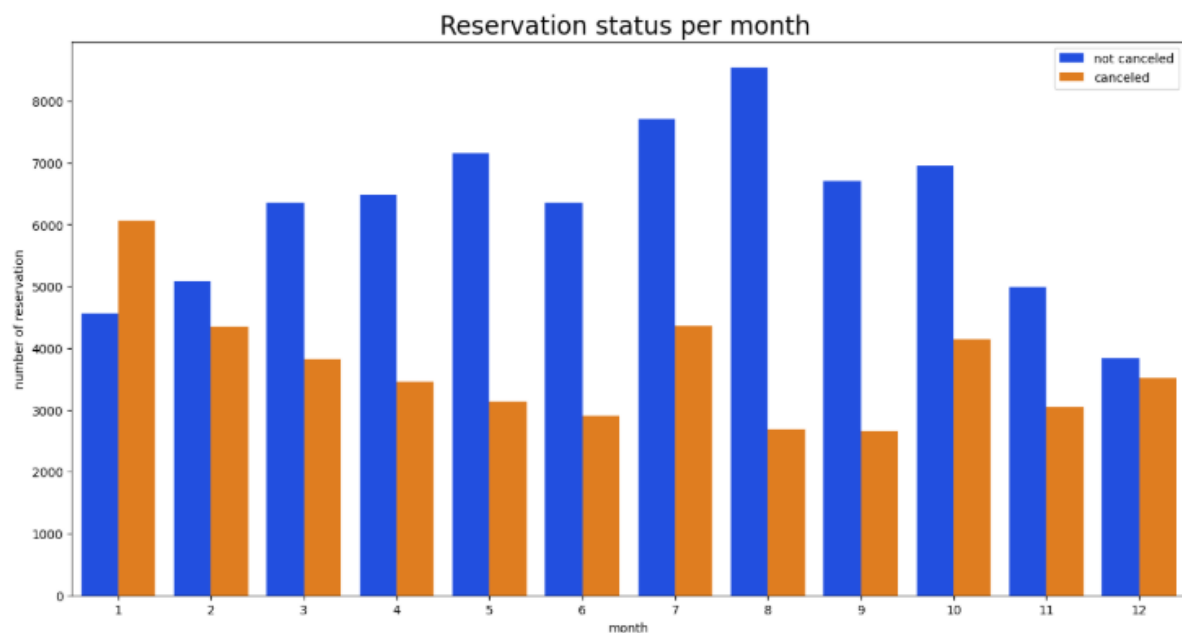
The accompanying bar graph shows the percentage of reservations that were cancelled and those that were not. It is evident that a significant number of reservations remain active. However, 37% of clients cancelled their reservations, which has a considerable impact on the hotel's revenue.



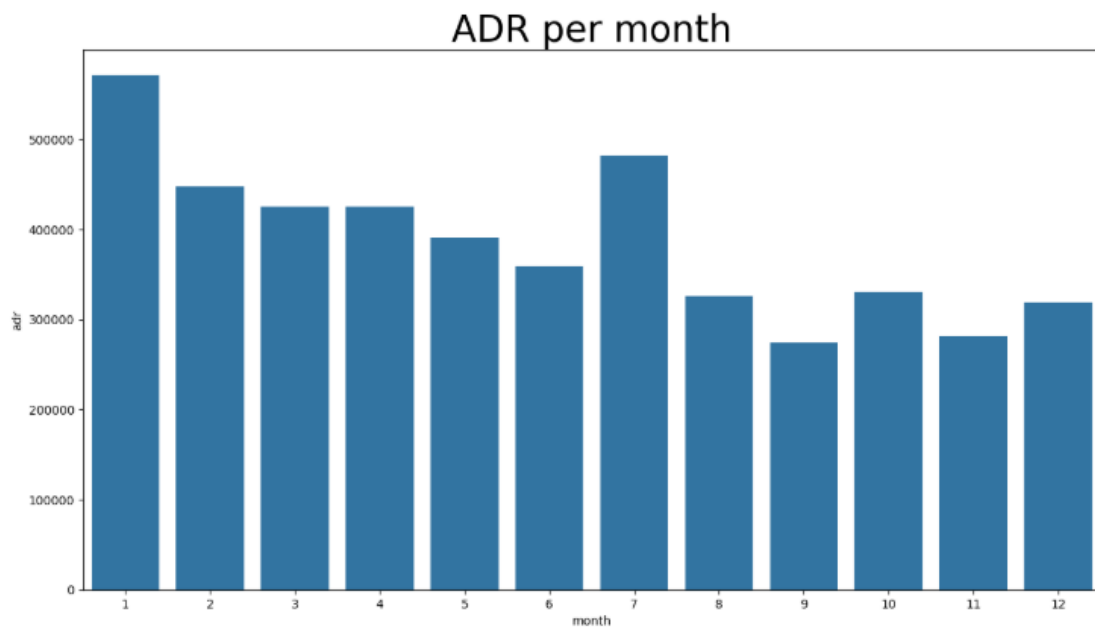
Compared to resort hotels, city hotels receive more bookings. This could be because resort hotels are generally more expensive than city hotels.



The line graph above shows that, on certain days, the average daily rate for city hotels is lower than that of resort hotels, and on other days, it drops even further. It goes without saying that resort hotel rates may increase on weekends and holidays.

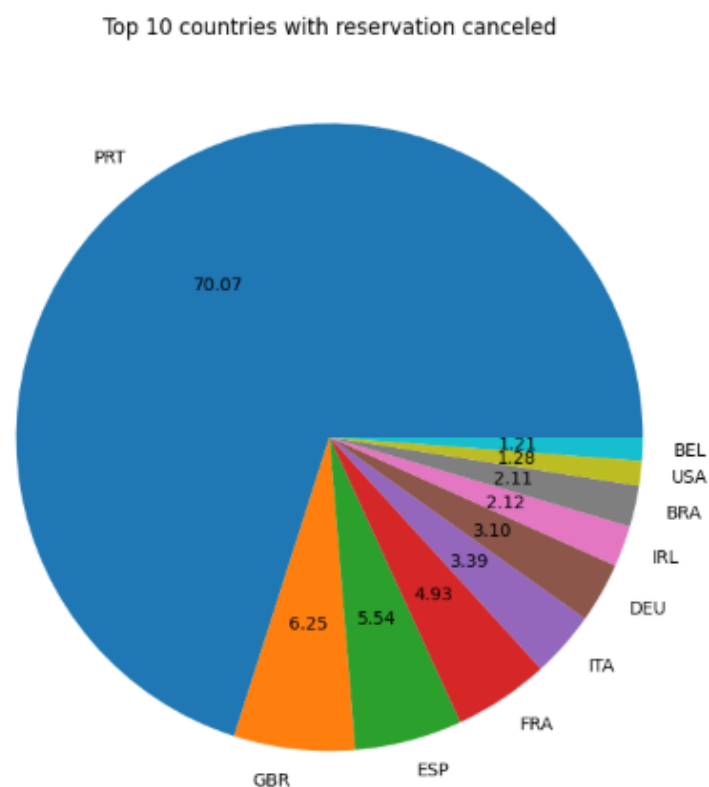


We have created a grouped bar graph to analyse the months with the highest and lowest reservation levels based on reservation status. As observed, both confirmed and cancelled reservations peak in August. However, January has the highest number of cancelled reservations.



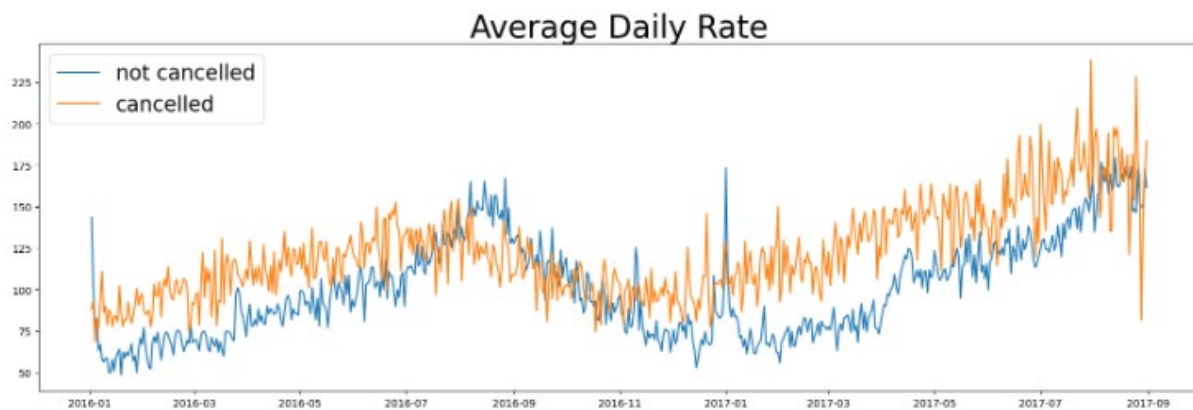
This bar graph demonstrates that cancellations are most common when prices are highest and least common when they are lowest. Therefore, the cost of accommodation is the primary factor influencing cancellations.

Now, let's identify the country with the highest number of cancelled reservations. Portugal ranks at the top with the most cancellations



Let's examine the sources from which guests are booking hotels. Are they booking directly, through groups, or via online or offline travel agencies?

Around 46% of clients make reservations through online travel agencies, while 27% come from group bookings. Only 4% of clients book hotels directly by visiting them and making reservations.



As seen in the graph, reservations are more likely to be cancelled when the average daily rate is high. This clearly supports the previous analysis, confirming that higher prices lead to higher cancellation rates.

Suggestion

1. Provide accurate photos of hotel to reduce cancellations.
2. Utilize a reliable online booking platform that allows guests to make reservations easily. Provide high-quality photos and detailed descriptions of properties.
3. Stay competitive with your pricing while maintaining the quality of the services. Offer promotions, discounts, and loyalty programs to attract repeat customers.
4. Encourage satisfied guests to leave positive reviews on platforms like TripAdvisor, Yelp, or Google Reviews. Respond to reviews, whether positive or negative, to show the commitment to customer satisfaction.
5. Use social media platforms to promote your hotel and engage with potential guests. Share high-quality images, updates, and special offers.