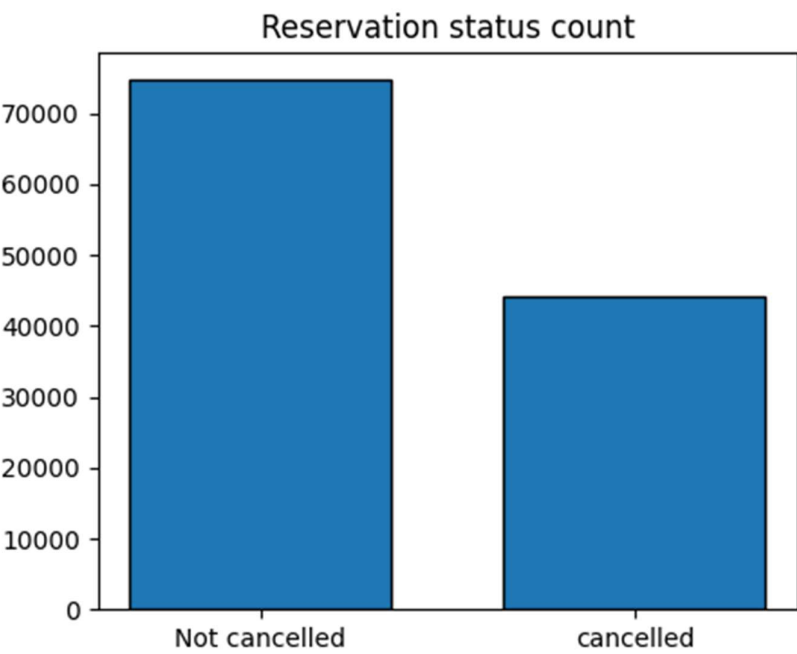


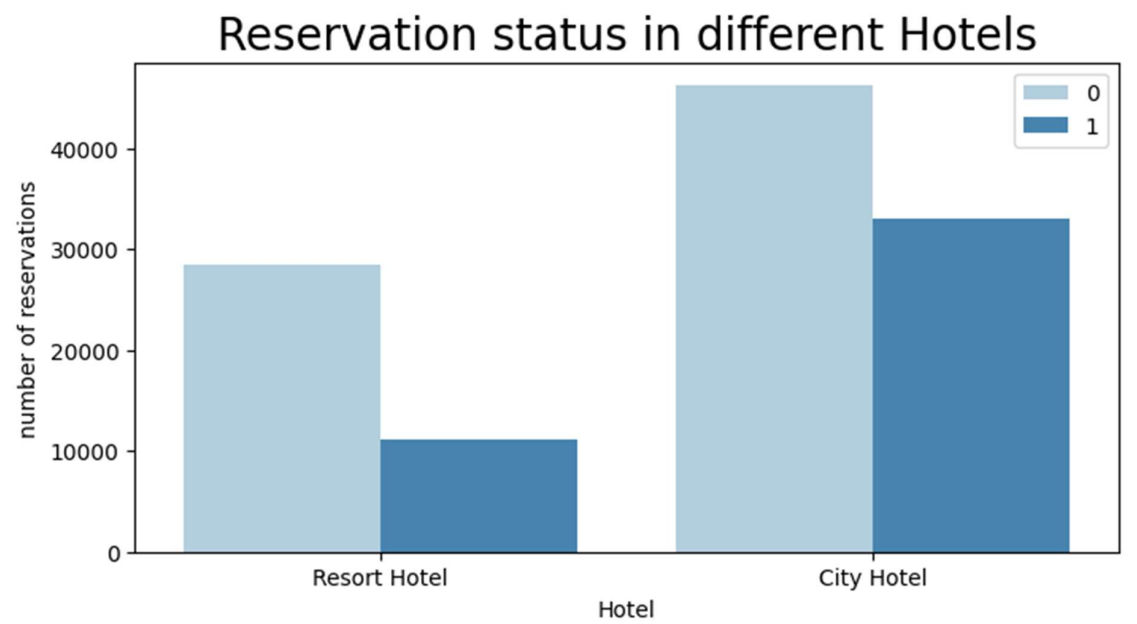
Hotel Booking Analysis

- **Booking Patterns**
- Analyze the distribution of bookings over time (e.g., by month, day of the week).
- Identify any seasonal trends or patterns in bookings.
- Compare bookings for different room types, meal plans, or other relevant factors.
- **Guest Demographics**
- Explore the demographics of guests (e.g., age, nationality).
- Identify the most common guest profiles.
- Analyze the distribution of bookings based on guest demographics.
- **Cancellation Analysis**
- Determine the cancellation rate and its trend over time.
- Identify factors that correlate with higher cancellation rates.
- Analyze the lead time for cancellations.
- **Average Daily Rate (ADR)**
- Calculate and visualize the ADR over time.
- Compare ADR for different room types or customer segments.
- **Revenue per Available Room (RevPAR)**
- Calculate and visualize the RevPAR.
- Identify factors that impact RevPAR.
- **Booking Sources**
- Analyze the distribution of bookings by source (e.g., online travel agencies, direct bookings).
- Assess the performance of different booking channels.
- **Length of Stay**
- Explore the average length of stay for guests.
- Analyze any trends or variations in length of stay.

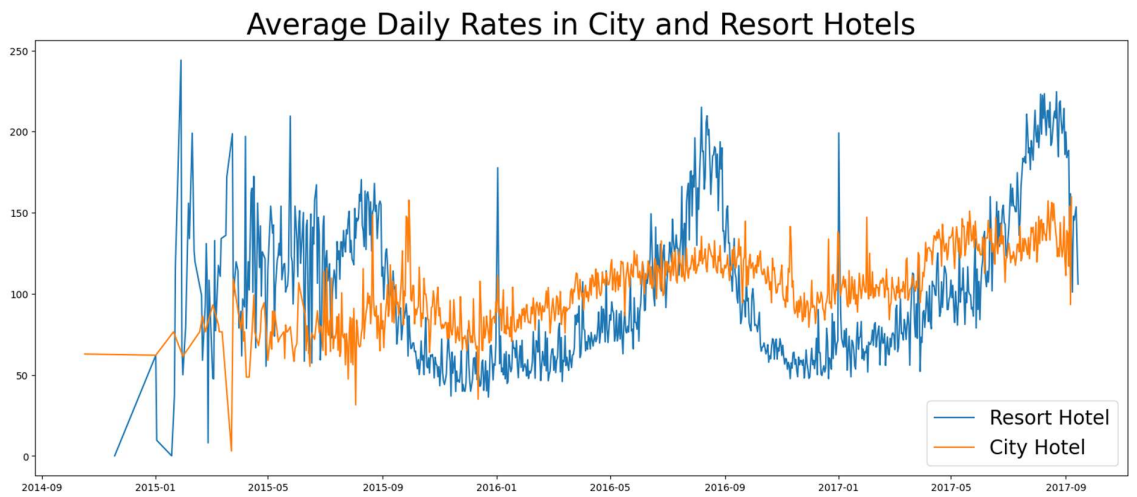
Analysis and Findings



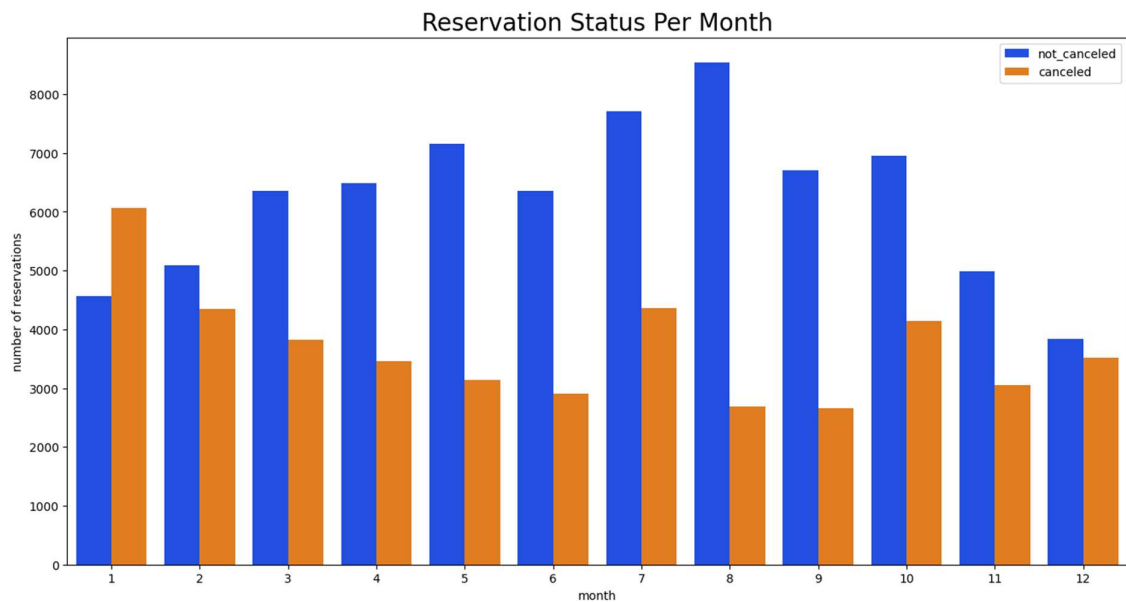
The accompanying bar graph shows the percentage of reservations that are canceled and those that are not. It is obvious that there are still a significant number of reservations that have not been canceled. There are still 37% of clients who canceled their reservation, which has a significant impact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



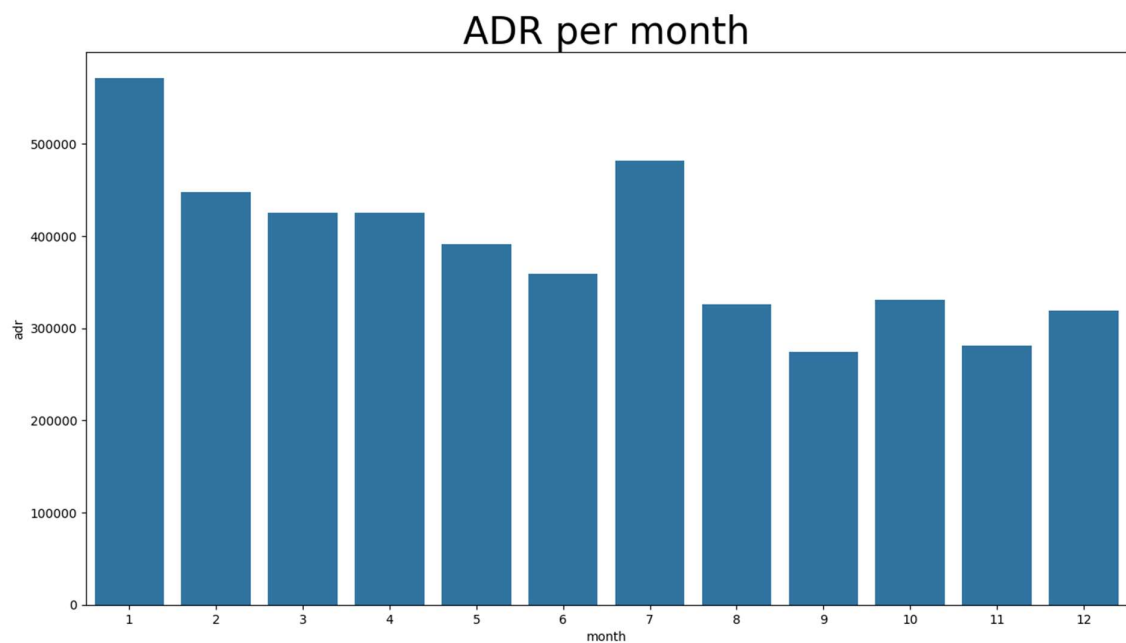
In comparison to resort hotels, city hotels have more bookings. It's possible that resort hotels are more expensive than those in cities.



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.



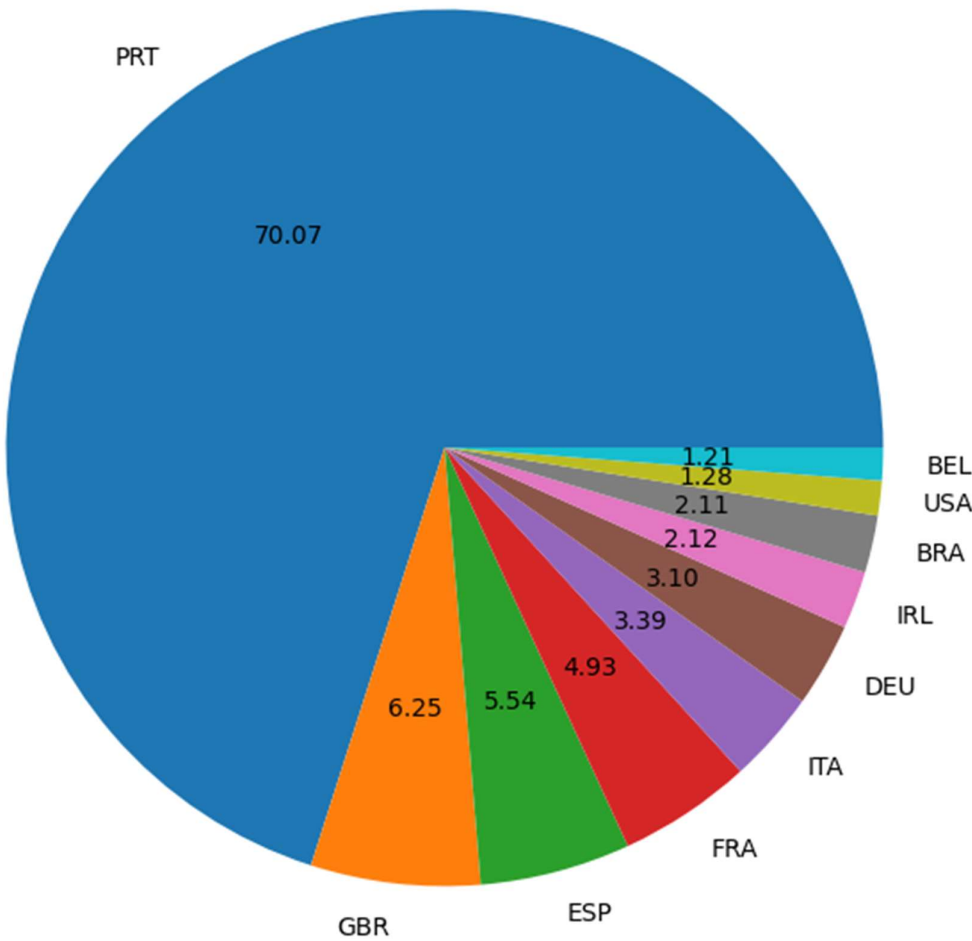
We have developed the grouped bar graph to analyze the months with the highest and lowest reservation levels according to reservation status. As can be seen, both the number of confirmed reservations and the number of cancelled reservations is largest in the month of August. Whereas January is the month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



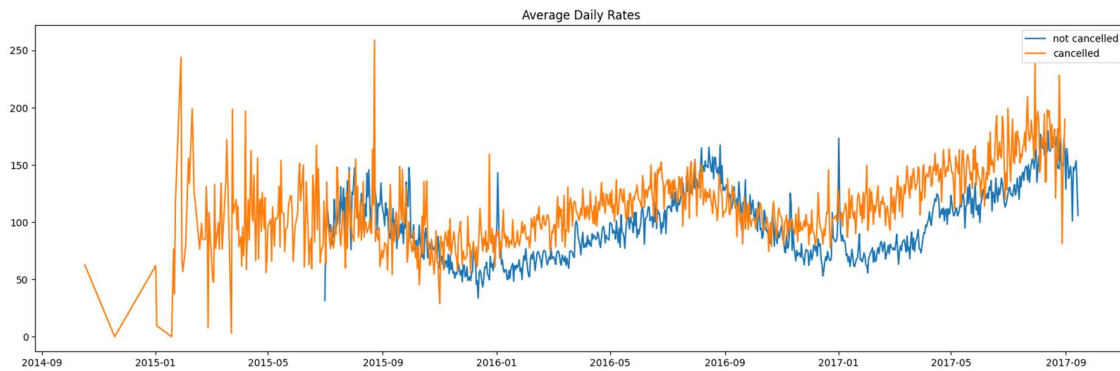
This bar graph demonstrates that cancellations are most common when prices are greatest and are least common when they are lowest. Therefore, the cost of the accommodation is solely responsible for the cancellation.

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

Top 10 countries with reservation canceled



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 cancelled when the average daily rate is higher than when it is not cancelled. 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 locations. They can also provide some discounts to the consumers.
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 the highest in the month.
4. They can also increase the quality of their hotels and their services mainly in Portugal to reduce the cancellation rate.