Hotel Booking Cancellation Analysis Report

1. Business Problem

In recent years, both City Hotel and Resort Hotel have experienced high reservation cancellation rates. These cancellations have led to several operational challenges, including reduced revenue and suboptimal room utilization. As a result, minimizing cancellation rates has become a primary objective for both hotels in order to improve revenue efficiency. This report analyzes hotel booking cancellations and other relevant factors influencing business performance and annual revenue and provides data-driven business recommendations to address this issue.

2. Assumptions

1. There were no extraordinary events between 2015 and 2017 that significantly impacted the dataset.

2. The data remains relevant and suitable for analyzing and proposing effective hotel business strategies.

3. Implementing the recommended strategies will not result in any unforeseen negative consequences.

4. The hotels are not currently applying any of the proposed solutions.

5. Booking cancellations are the primary factor affecting revenue efficiency.

6. Cancellations lead to vacant rooms for the originally booked duration.

7. Customers make and cancel reservations within the same calendar year.
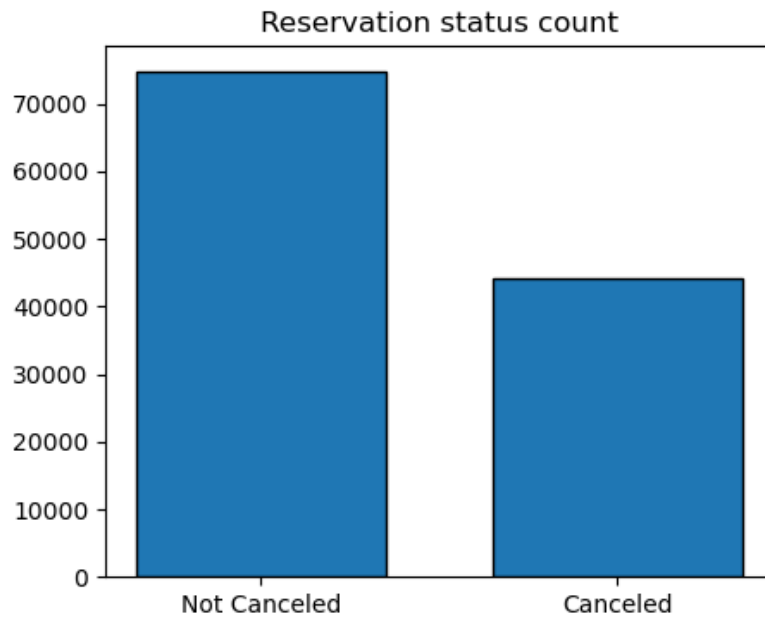
3. Research Questions

1. Which factors influence hotel reservation cancellations?

2. How can hotels reduce reservation cancellation rates?

3. How can the analysis assist hotels in making better pricing and promotional decisions?
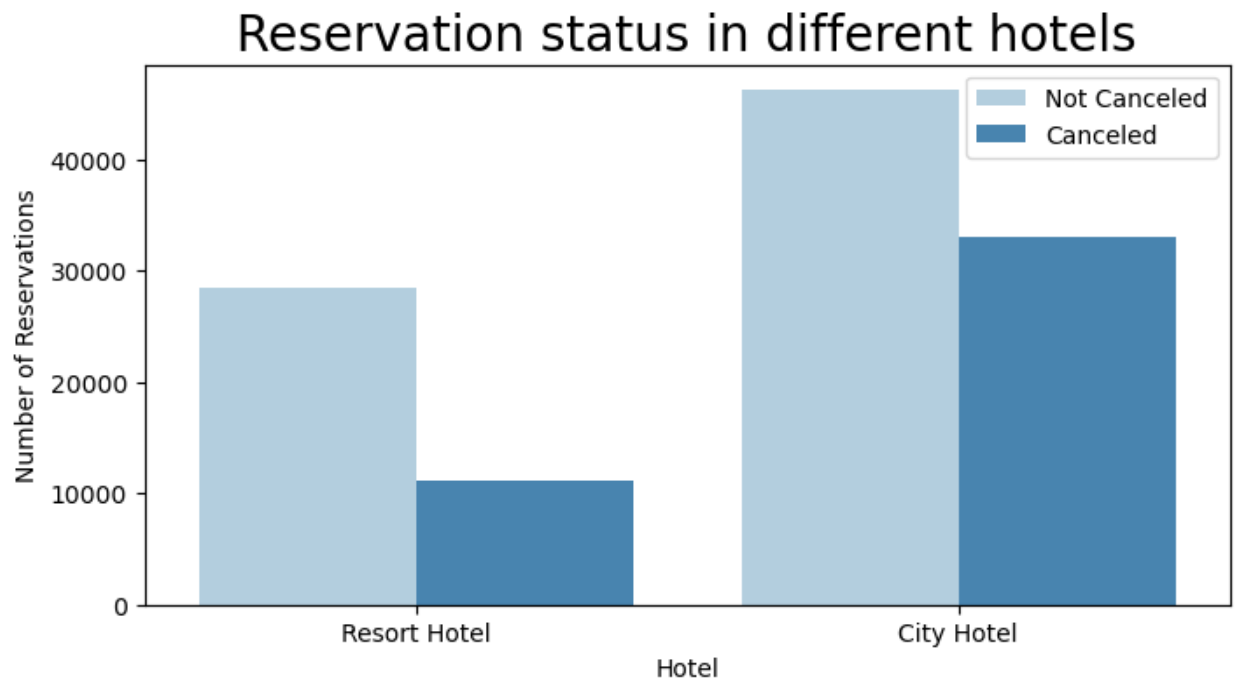
4. Hypotheses

1. Higher room prices lead to increased cancellation rates.

2. Longer waiting periods increase the likelihood of cancellations.

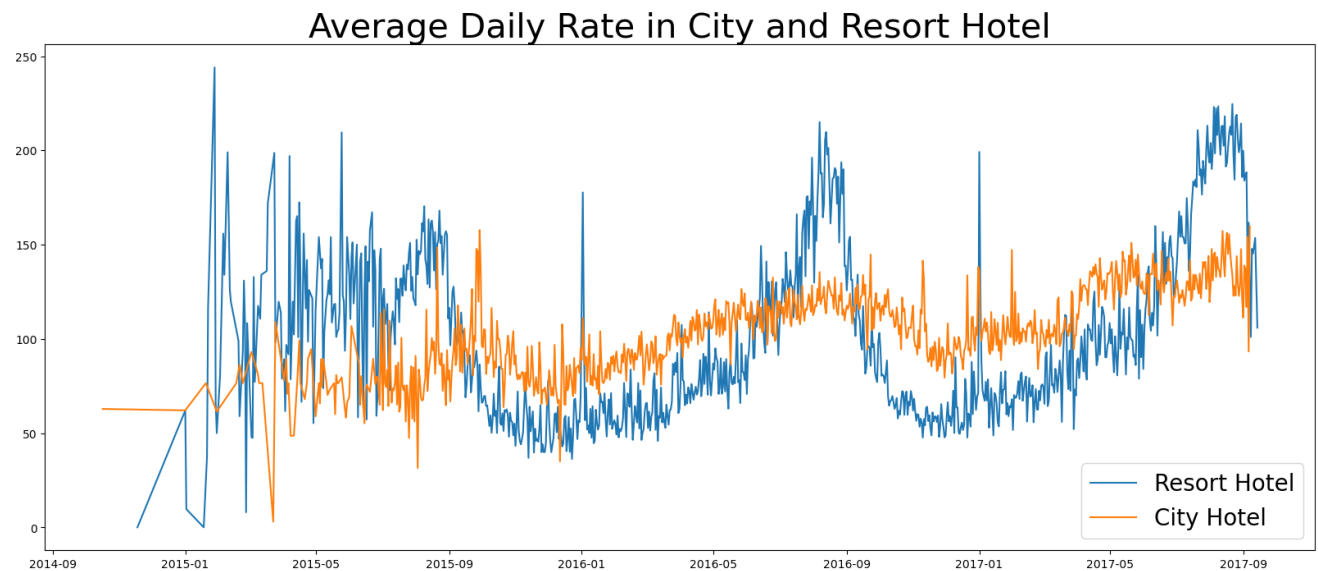3. A majority of hotel reservations are made through offline travel agents.

5. Analysis and Findings
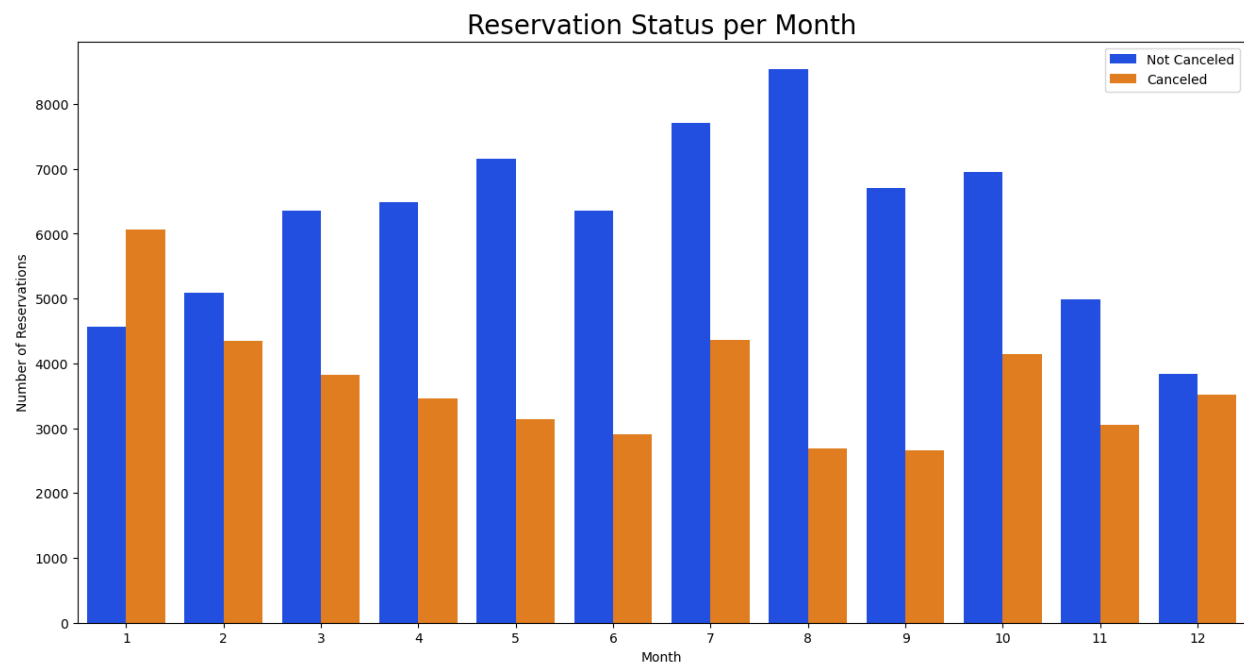

Reservation status count

The analysis reveals that although a majority of reservations are not cancelled, approximately **37% of bookings are cancelled**, which has a substantial negative impact on hotel revenue.
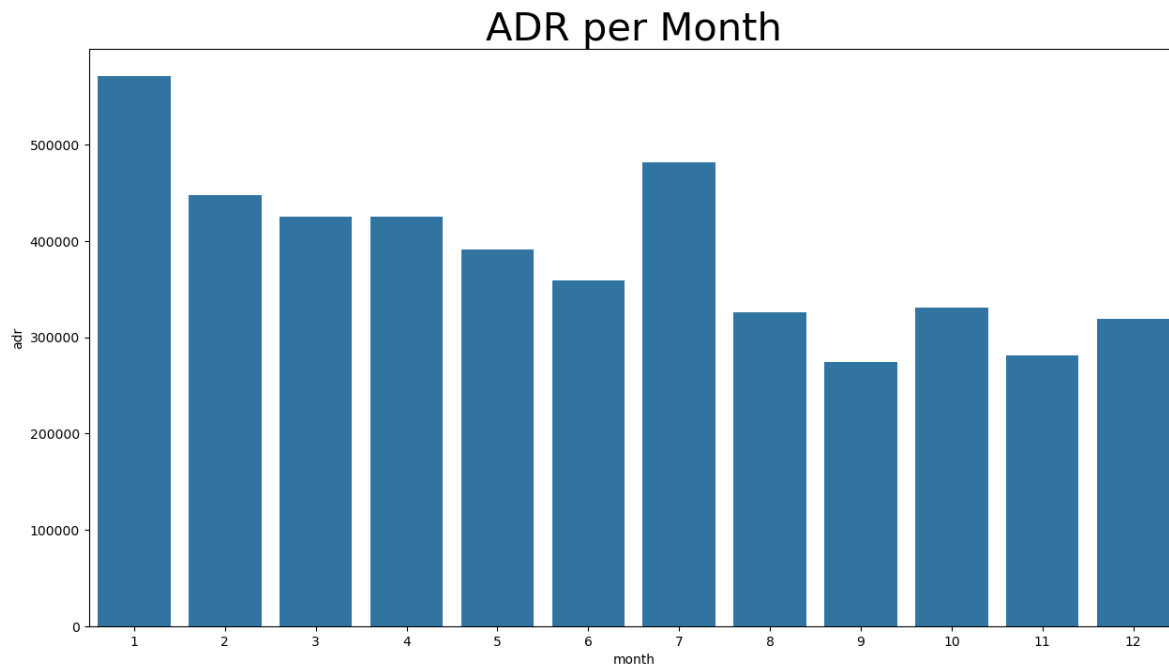

Reservation status in different hotels

A comparison between hotel types shows that **City Hotels receive more bookings than Resort Hotels**, possibly due to higher room prices at resort properties.

Average Daily Rate in City and Resort Hotel

The analysis of the Average Daily Rate (ADR) indicates that, on certain days, **City hotel rates are lower than Resort hotel rates**, while on other days the difference is minimal. **Resort hotel prices tend to increase during weekends and holidays**, contributing to higher cancellation rates during these periods.
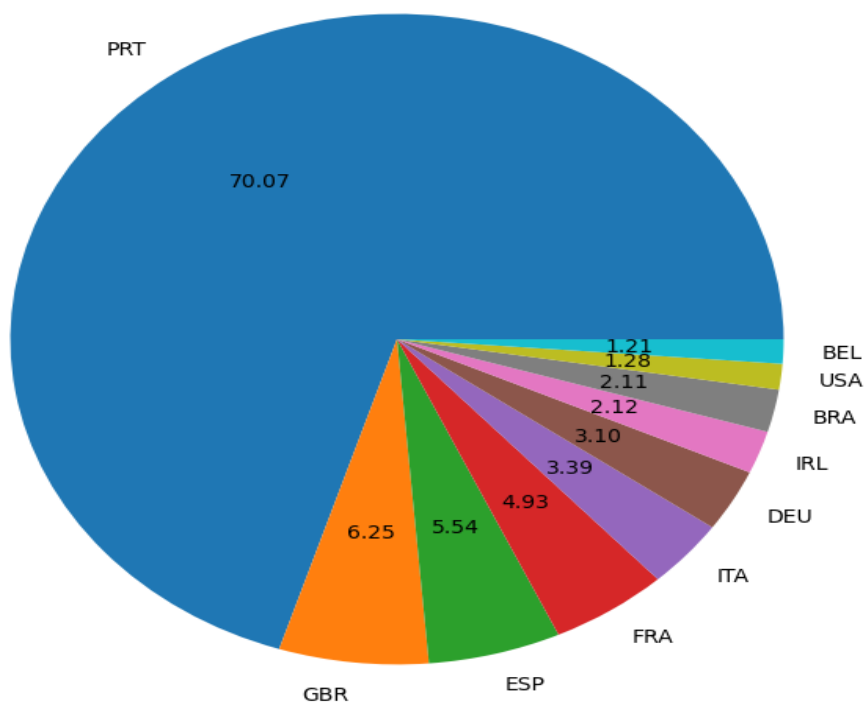
Reservation Status per Month

Monthly booking trends reveal that **August has the highest number of confirmed reservations and the lowest number of cancellations**, whereas **January experiences the highest number of cancellations.**
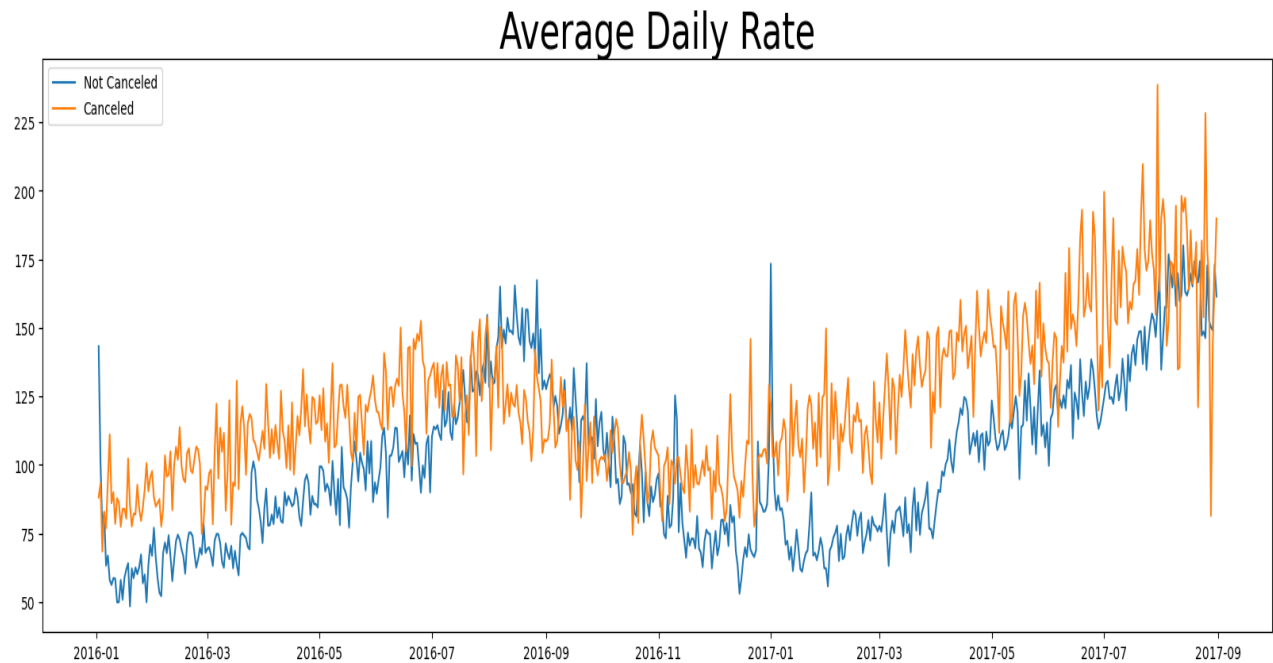
ADR per Month

Pricing analysis clearly demonstrates that cancellations increase as room prices rise and decrease when prices are lower, indicating that **pricing is a major driver of cancellations.**

Top 10 Countries with Canceled Reservation

Country-wise analysis shows that **Portugal accounts for the highest number of cancelled reservations.**

Booking channel analysis reveals that approximately **46% of customers book through online travel agencies**, 27% through group bookings, and only 4% book directly with the hotels.

Finally, a direct comparison of ADR between cancelled and non-cancelled reservations confirms that **reservations with higher average daily rates are more likely to be cancelled**, supporting the hypothesis that higher prices lead to increased cancellations.

6. Suggestions and Recommendations

1. Since cancellation rates rise with increasing prices, hotels should revise their pricing strategies by offering competitive and location-based pricing. Targeted discounts and promotional offers can help reduce cancellations.

2. As Resort Hotels exhibit a higher cancellation ratio compared to City Hotels, especially during weekends and holidays, reasonable price reductions during these periods could improve booking retention.

3. Given the high cancellation rate in January, hotels should introduce marketing campaigns, promotional offers, or seasonal discounts during this month to stabilize revenue.

4. Improving service quality and overall customer experience, particularly in Portugal, can help reduce cancellation rates and improve customer loyalty.

7. Conclusion

The analysis confirms that pricing, booking channels, seasonality, and location significantly influence hotel reservation cancellations. By adopting dynamic pricing strategies, targeted promotions, and service improvements, both City Hotel and Resort Hotel can effectively reduce cancellation rates and enhance revenue performance.