Contents

Hotel Booking Analysis Report

1. Introduction

This report analyzes hotel booking data to understand trends in reservations, cancellations, and pricing (Average Daily Rate, ADR) across different hotels. The goal is to provide insights for hotel management to optimize operations, pricing, and customer experience.

2. Data Overview

The dataset contains information about hotel bookings, including the hotel type, reservation date, cancellation status, ADR (price per night), customer country, and market segment.

After cleaning, removing missing data, and excluding extreme ADR values (above 5000), the dataset was ready for analysis.

3. Reservation Status Analysis
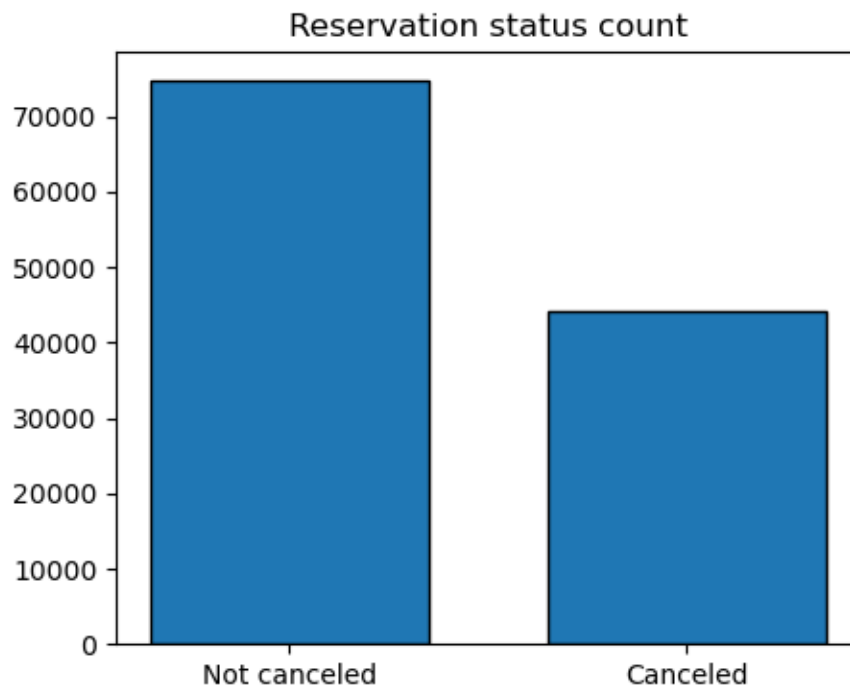
3.1 Reservations by Hotel

A bar chart was created to show the number of canceled and not canceled reservations for each hotel type.

Insights:

- City Hotel receives more bookings than Resort Hotel.
- Cancellations are slightly higher at the City Hotel.
- This helps management identify which hotel type has higher booking volume, and which may need more attention to reducing cancellations.
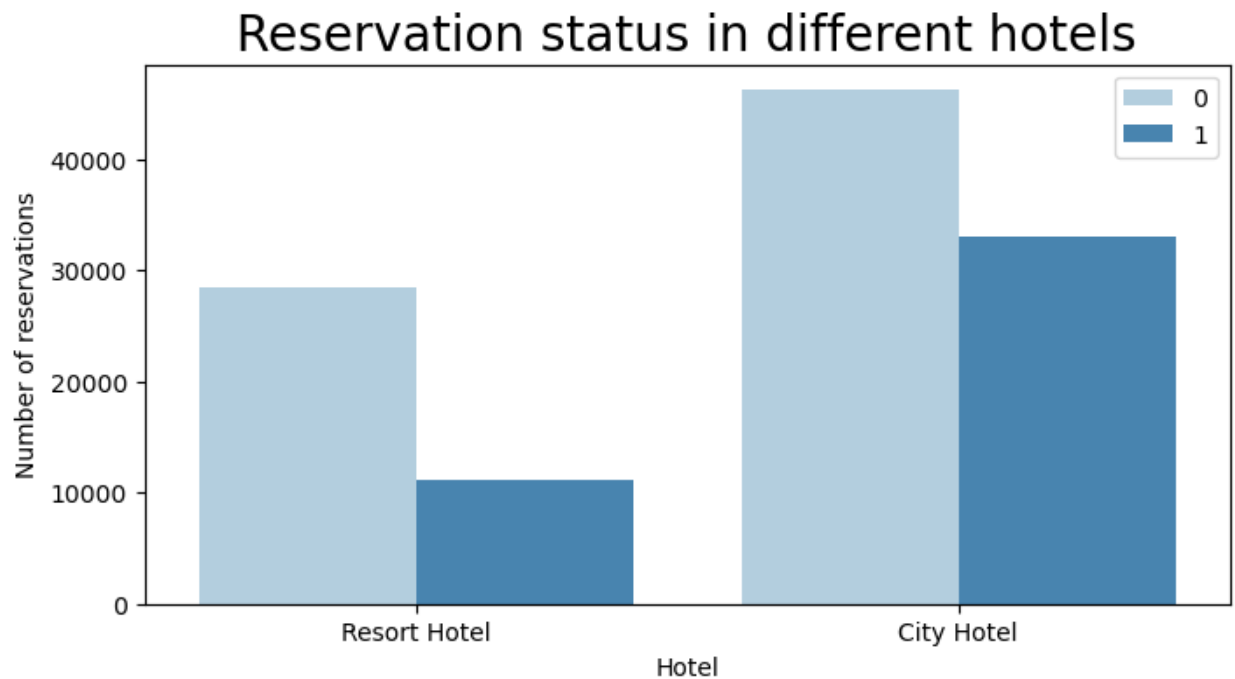
3.2 Overall Cancellation Percentage

A simple bar chart and pie chart show the proportion of canceled vs. completed reservations.
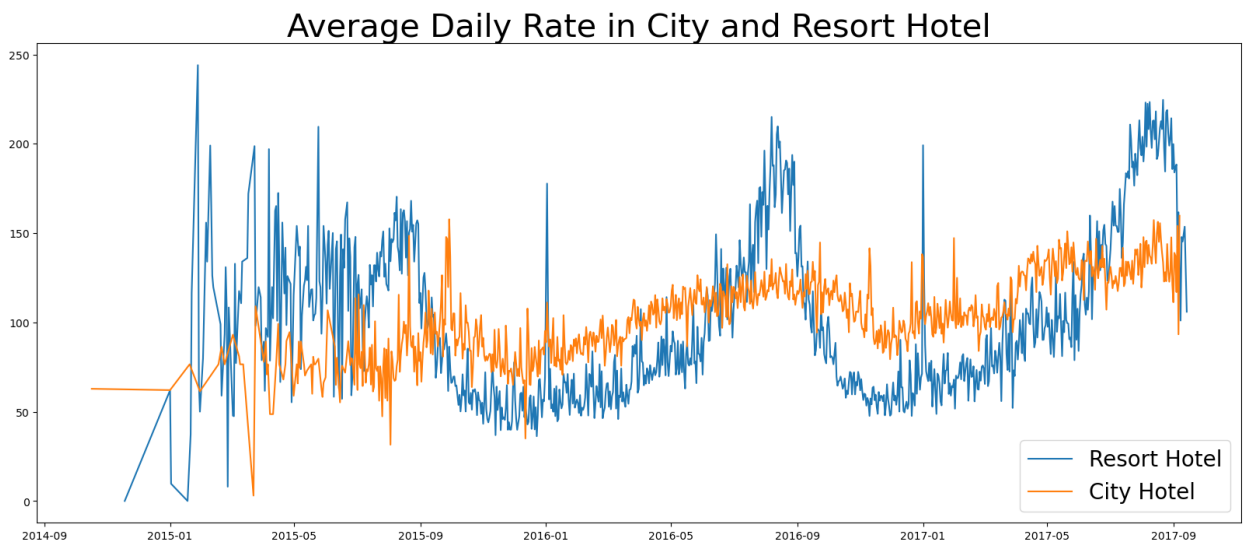
Insights:

- Approximately 37% of all bookings are canceled, while 63% are completed.
- Visualizing it as a pie chart makes it easy to see the scale of cancellations.

4. Average Daily Rate (ADR) Analysis

We analyzed the ADR trends for both City Hotel and Resort Hotel over time.

Insights:

- ADR fluctuates over time, with peaks and dips reflecting high and low demand periods.
- City Hotel generally has a slightly higher ADR than Resort Hotel.
- Understanding ADR trends helps with pricing strategy and maximizing revenue.
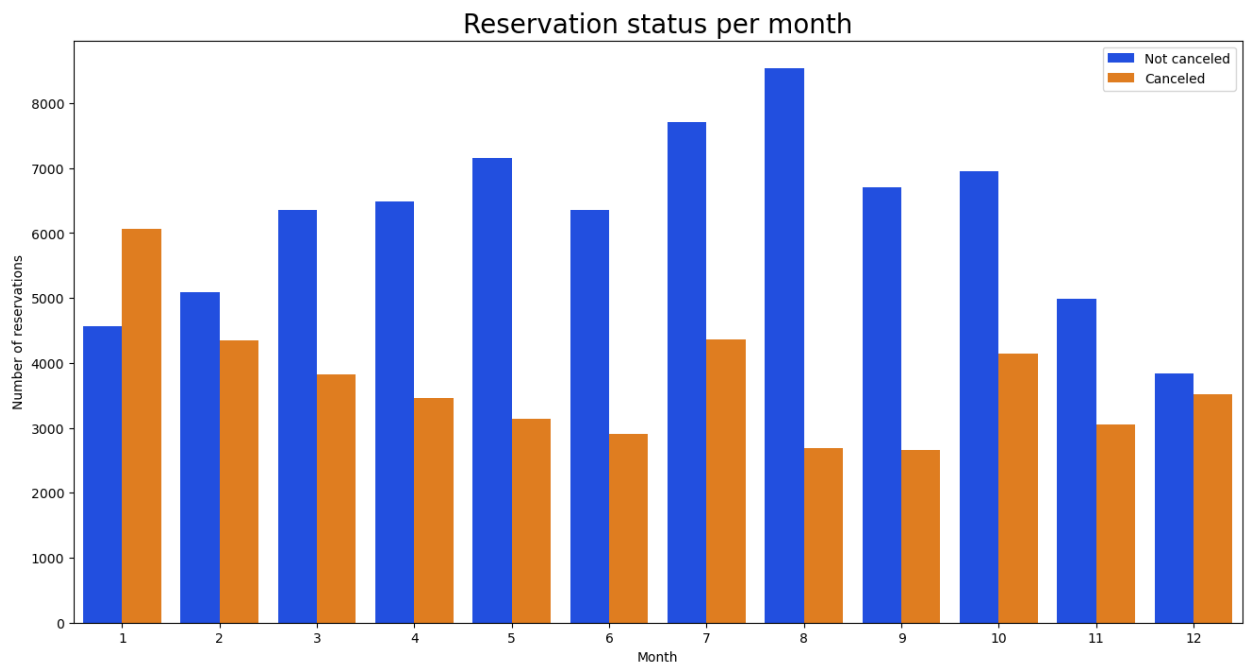
5. Monthly Trends

5.1 Reservations per Month

A bar chart shows the number of reservations per month, separated by canceled vs. not canceled.

Insights:

- Bookings are highest in summer months (June–August).
- Cancellations also increase during these months, but most bookings are still completed.
- This highlights seasonal demand, helping hotels plan staff and resources.
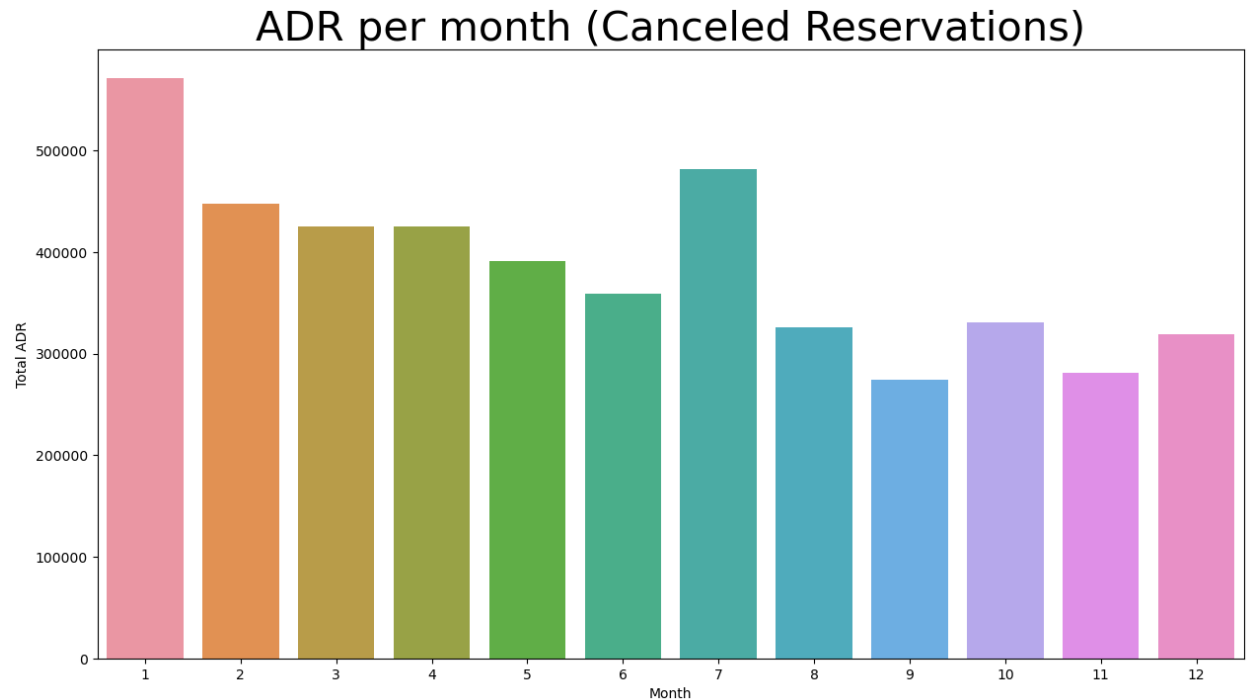
5.2 ADR per Month for Canceled Reservations

A bar chart shows the total ADR for canceled reservations by month.

Insights:

- Certain months show higher ADR even for canceled bookings, suggesting higher room prices during busy seasons.
- This helps the hotel understand revenue lost due to cancellations.
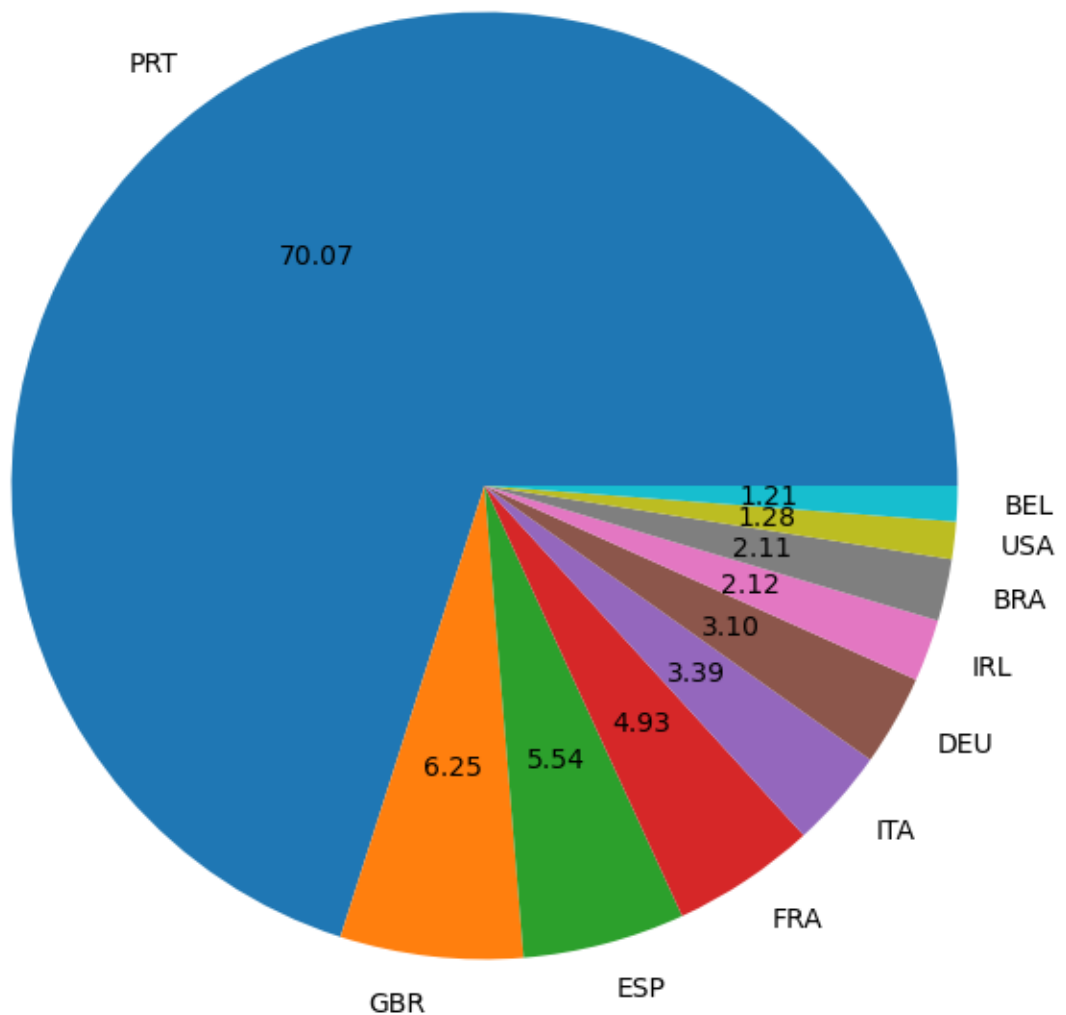
6. Customer Demographics

6.1 Top 10 Countries with Canceled Reservations

A pie chart displays the top 10 countries contributing to cancellations.

Insights:

- Most cancellations come from [Top countries from your data].
- This can help target communication strategies or cancellation policies for specific regions.

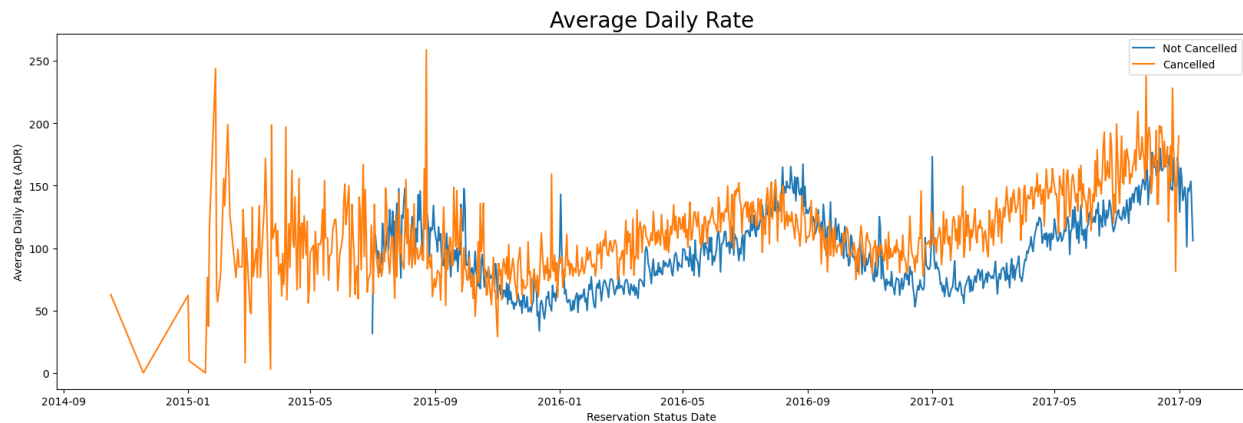Top 10 countries with reservation canceled

6.2 Market Segment Analysis

The market segment distribution shows where customers come from (e.g., online, corporate, travel agents).

Insights:

- Among canceled bookings, certain segments like online bookings may have higher cancellation rates.
- This information helps with marketing and promotional planning.

7. ADR Trends Over Time

Line charts were plotted to show the ADR for canceled vs. not canceled bookings over the full period and a specific period (2016 to September 2017).

Insights:

- ADR for not canceled bookings is generally higher than for canceled ones.
- Peaks and dips indicate seasonal pricing trends.
- Filtering by a specific period helps analyze trends during key booking seasons.
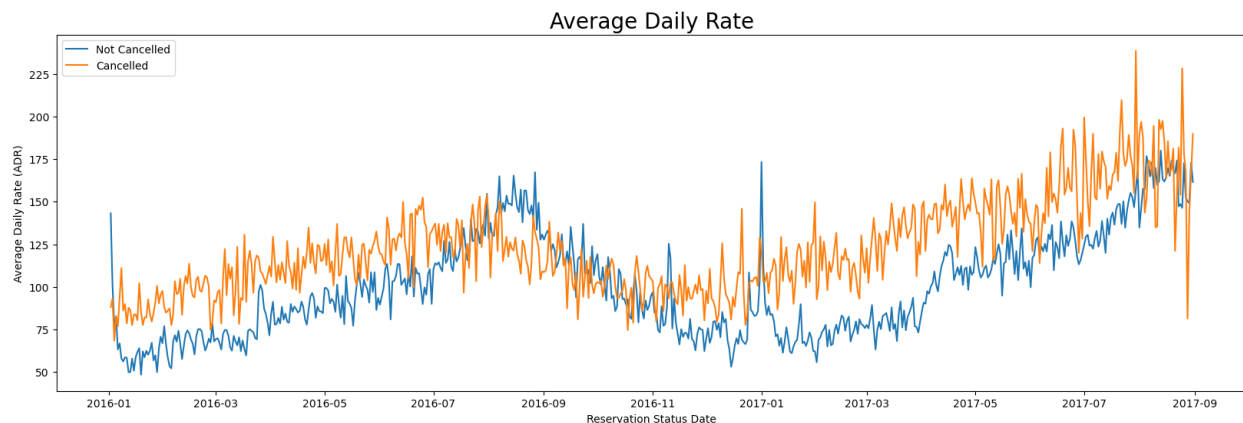
8. Conclusion

- City Hotel receives more bookings and slightly higher cancellations than Resort Hotel.
- Summer months have the highest booking volumes and higher ADRs.
- Cancellations account for a significant portion of bookings (~37%), which is important for revenue planning.
- ADR trends show seasonal pricing variations that hotels can leverage to maximize revenue.
- Customer country and market segment data provide insights into targeted marketing and policy improvements.

9. Recommendations

- Implement strategies to reduce cancellations, especially during peak months.
- Adjust pricing and promotions based on seasonal ADR trends.
- Focus on marketing campaigns for segments and countries with higher cancellations to improve booking reliability.