

# Project : Hotel Booking

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# Problem Statement:

High reservation cancellation rates are impacting hotel revenues. This analysis seeks to identify key factors driving cancellations and suggest strategies to optimize pricing and promotions to mitigate these losses.



# Project Assumption

01.

No unusual occurrences between 2015 and 2017 will have a substantial impact on the data used.

02.

The information is still current and can be used to analyze a hotel's possible plans in an efficient manner.

03.

The biggest factor affecting the effectiveness of earning income is booking cancellations.

# Research Questions

- What are the variables that affect hotel reservation cancellations?
- How can we reduce hotel reservation cancellations?
- How can hotels be assisted in making pricing and promotional decisions?



# Hypotheses

01

More cancellations occur when prices are higher.

02

When there is a longer waiting list, customers tend to cancel more frequently.

03

The majority of clients are coming from offline travel agents to make their reservations.

04

Higher lead times (the number of days between booking and arrival) increase the likelihood of cancellations.

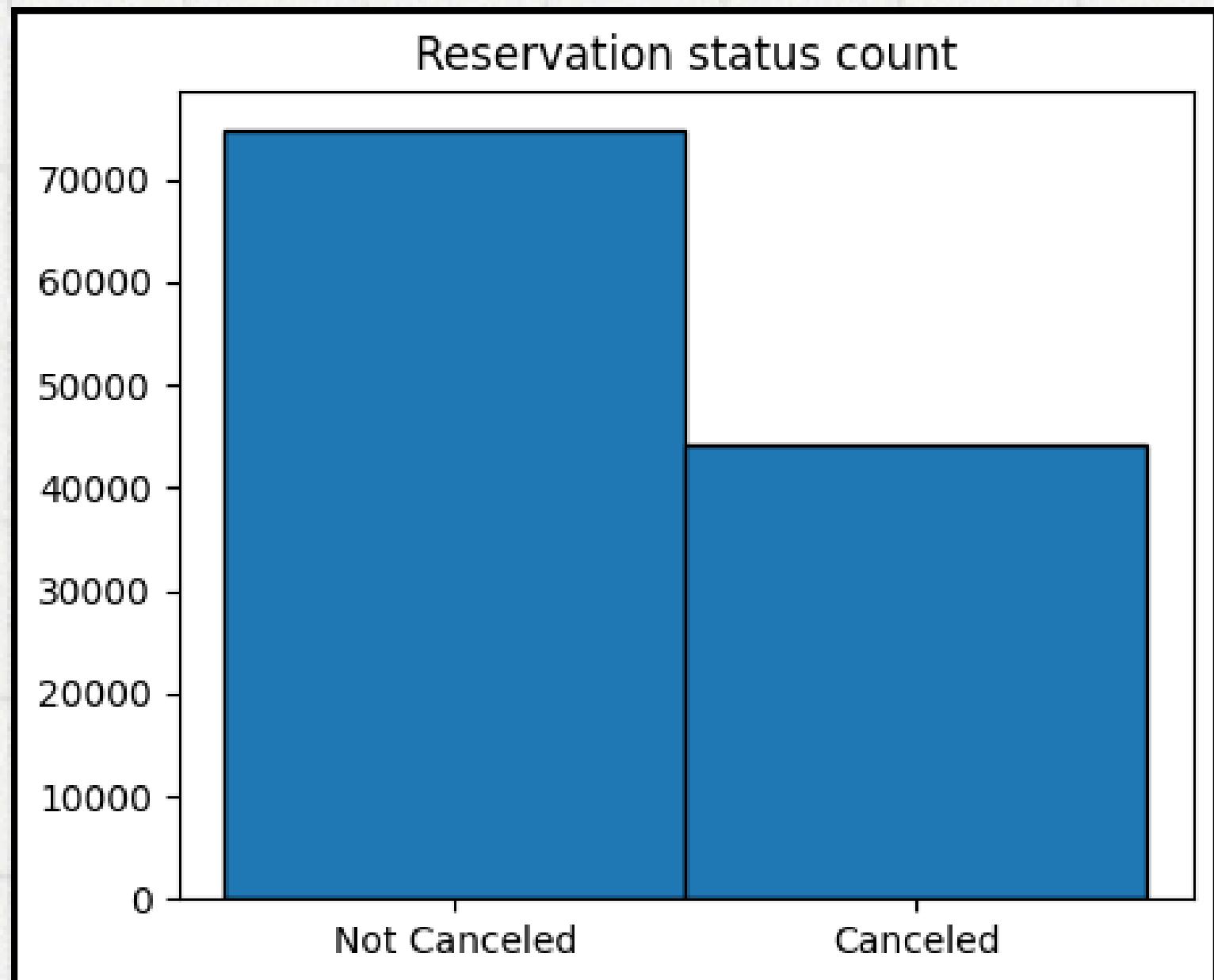


# Detailed Report

This report provides a detailed analysis of hotel booking data from 2015 to 2017. The goal is to identify factors affecting reservation cancellations and offer actionable insights for improving pricing and promotional strategies.

# Cancellation Rate:

- The cancellation rate is a critical metric as it directly impacts revenue.

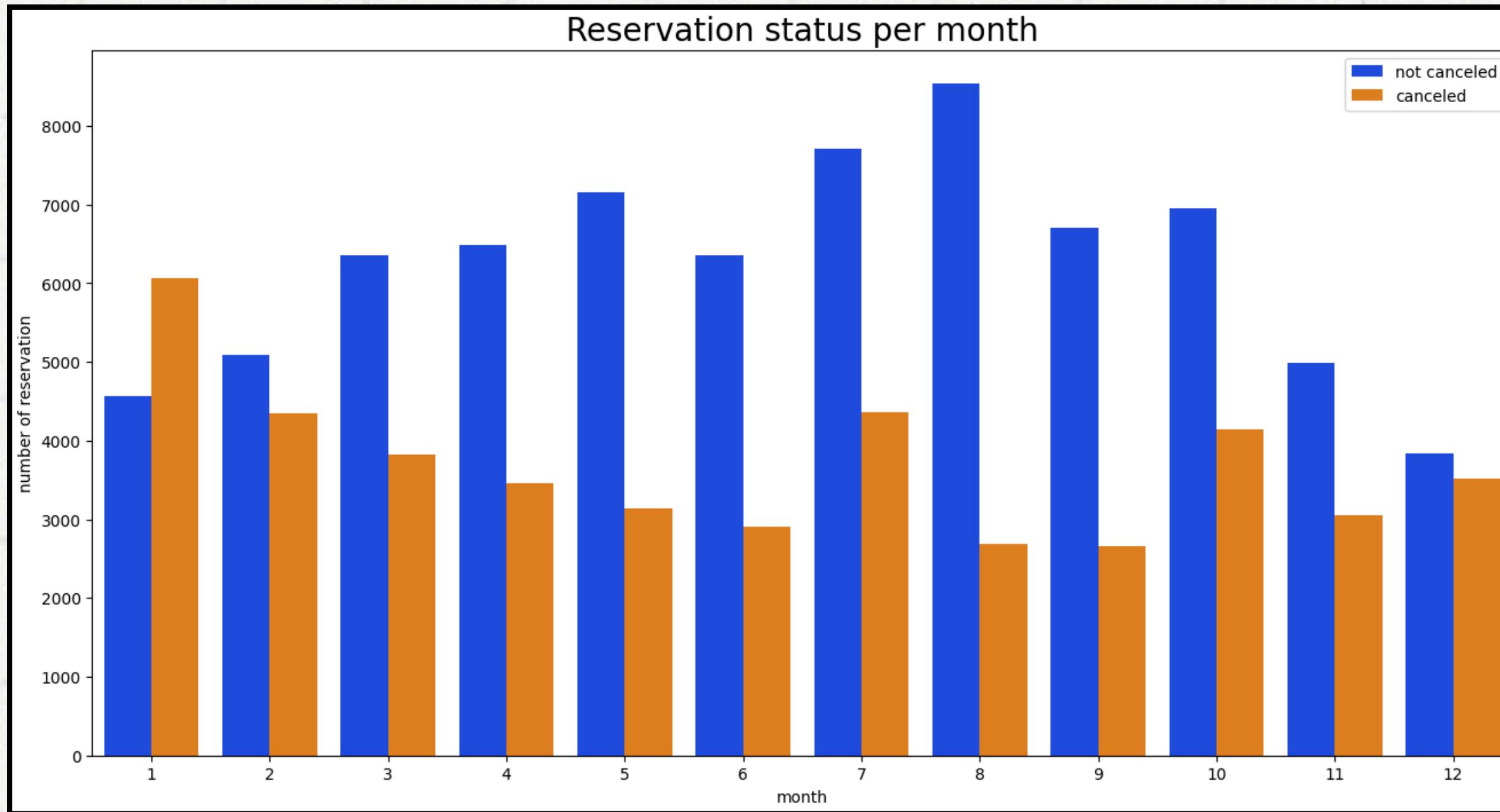


# Booking Distribution by Hotel Type

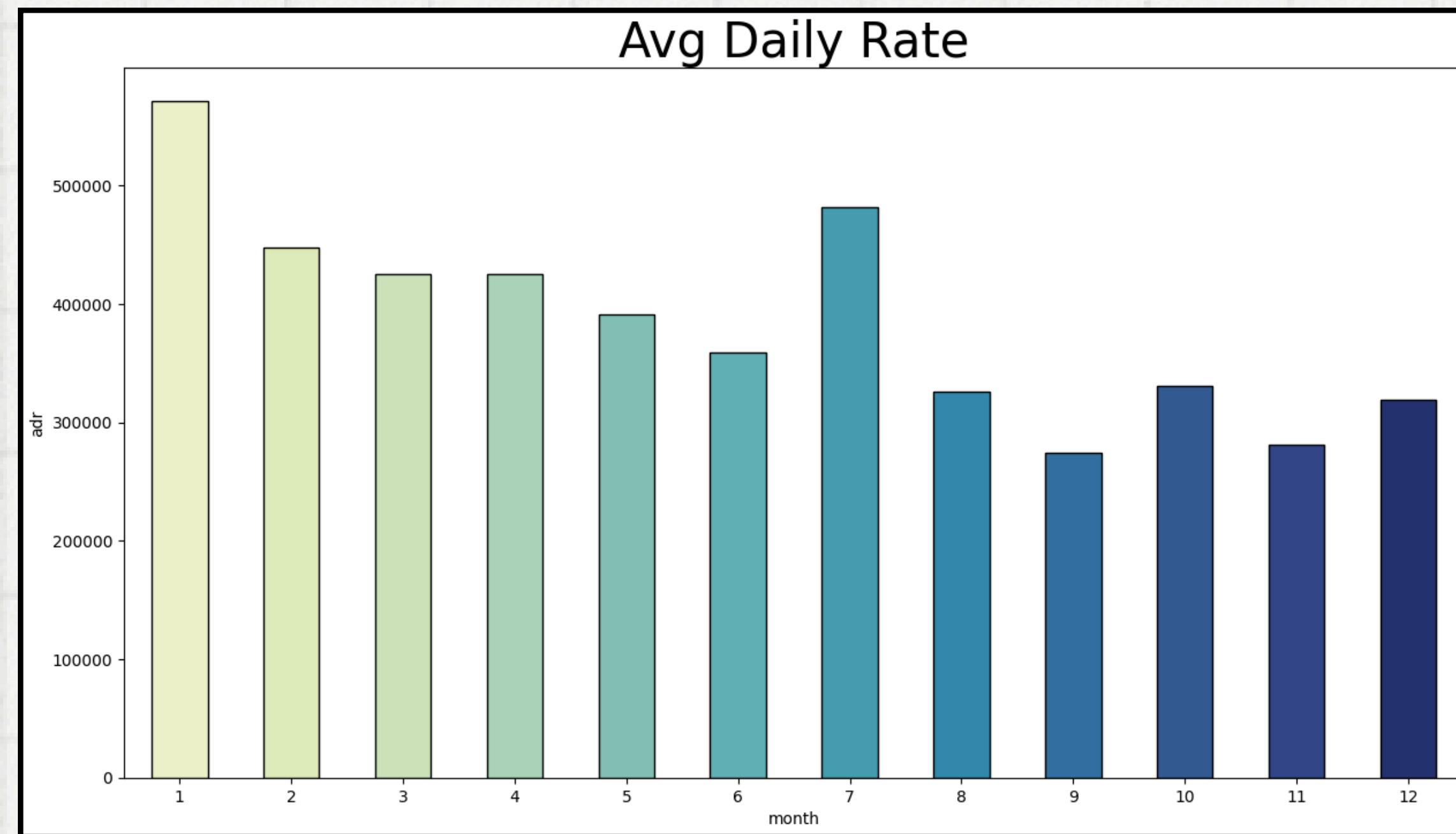
- Resort hotels and city hotels have different booking patterns.



# Monthly Booking and Cancellation Trends



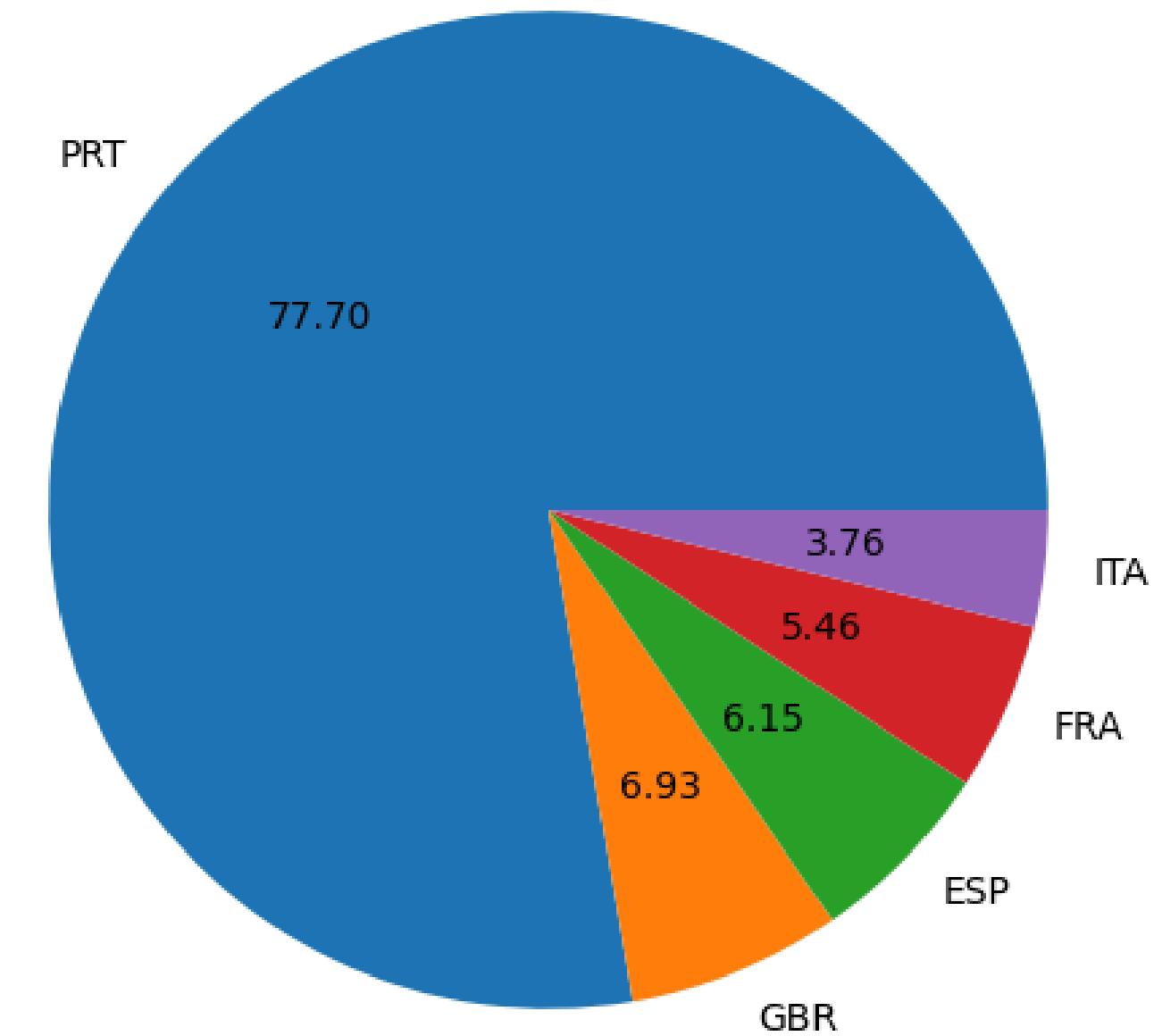
# Average Daily Rate:



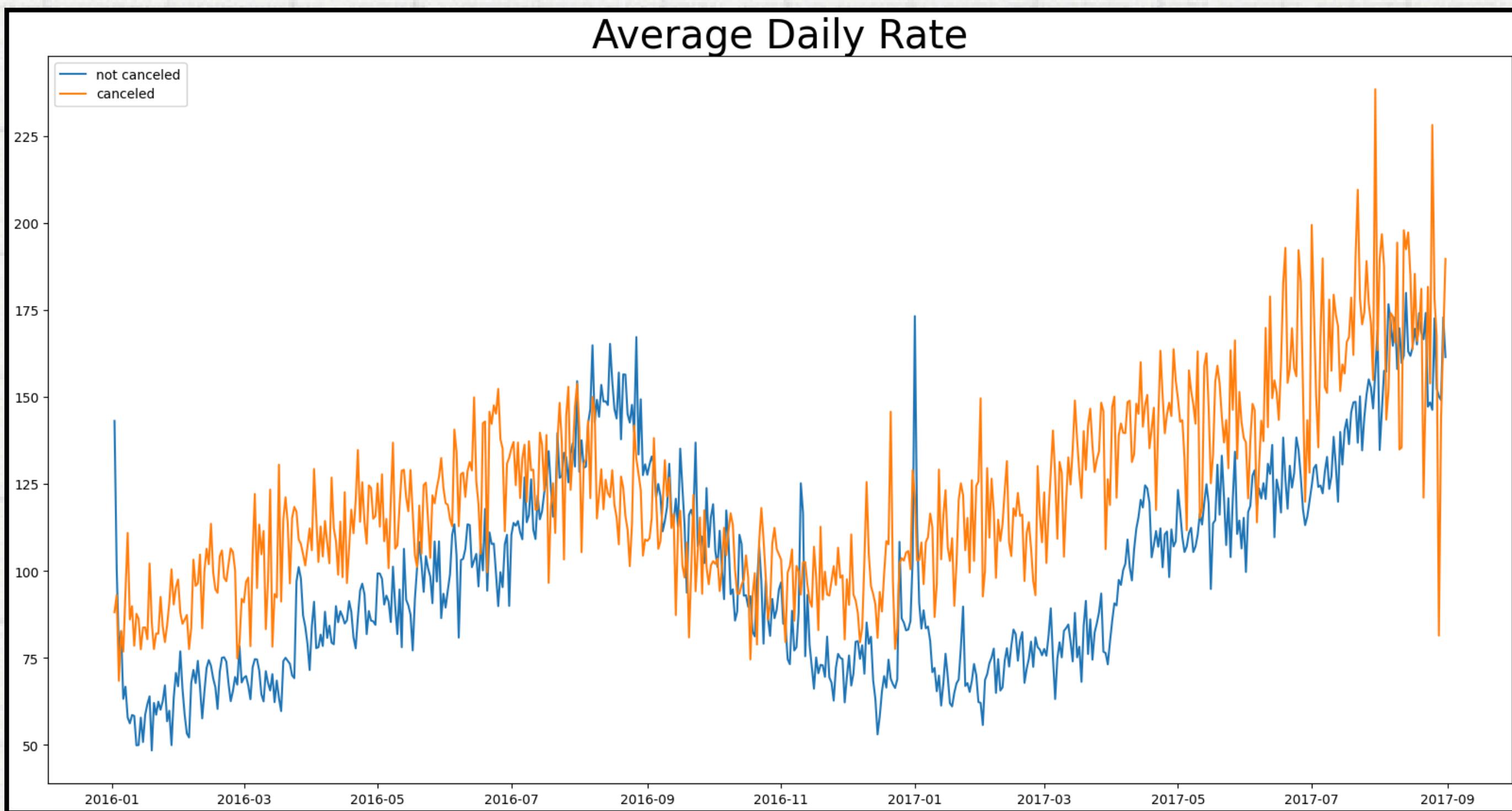
# Country-wise Cancellations:

- Understanding which countries have the highest cancellation rates can help in targeting specific markets.

Top 5 countries with reservation canceled



# Impact of Daily Rates on Cancellations



# **Insights**

## **from data and graphs**

## Overall Cancellation Rate:

The data reveals that 37% of clients canceled their reservations. This high cancellation rate significantly impacts the hotel's revenue and indicates a need for better strategies to reduce cancellations.

## Hotel Type Comparison:

City hotels have more bookings compared to resort hotels. This could be attributed to city hotels generally being more affordable than resort hotels. Resort hotels may see higher prices during weekends and holidays, which could deter some customers.

## Average Daily Rate Analysis:

ADR between city and resort hotels. On some days, city hotels have a lower ADR compared to resort hotels. This trend suggests that resort hotels adjust their prices higher on weekends and holidays, reflecting increased demand during these periods.

## Monthly Reservation Trends:

August experiences highest number of both confirmed and canceled reservations. Conversely, January has the highest cancellation rate. This seasonal pattern suggests that hotels might need to offer promotions or discounts during January to boost occupancy and reduce cancellations.

## Price Impact on Cancellations:

Clear relationship between price and cancellation rates. Cancellations are more frequent when prices are highest and least common when prices are lowest. This insight underscores the importance of competitive pricing strategies to minimize cancellations

## Country-wise Cancellations:

Portugal has the highest number of cancellations among all countries. This could indicate specific market conditions or customer behaviors in Portugal that lead to higher cancellation rates. Targeted strategies to understand and mitigate these factors could be beneficial.

## Booking Source Analysis:

A significant portion of clients (46%) make reservations through online travel agencies, while 27% come from groups. Direct bookings, where clients visit and make reservations in person, account for only 4%. This highlights the importance of online travel agencies.

## ADR and Cancellations:

The data clearly shows that higher ADR correlates with higher cancellation rates. This finding supports the need for flexible pricing strategies to keep rates competitive and reduce the likelihood of cancellations.

Adjust pricing strategies to reduce cancellation rates. Offer dynamic pricing and discounts during off-peak months like January to encourage bookings.

Target marketing campaigns and promotional offers in countries with high cancellation rates, especially Portugal.

# Suggestions

Enhance the quality of services, especially in resort hotels, and offer special packages during weekends and holidays to attract more bookings and reduce cancellations

Strengthen partnerships with online travel agencies since they contribute significantly to bookings. Provide exclusive deals and better incentives for direct bookings.

# Final reflections and future steps

By understanding the factors influencing hotel reservation cancellations, hotels can implement more effective pricing strategies and promotional campaigns. This will not only help in reducing cancellations but also in optimizing revenue and enhancing customer satisfaction.



**Thank you  
very much!**

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