

# Hotel Booking Cancellation Analysis Project

## 1. Introduction / Project Summary

This project analyzes hotel booking data to understand why customers cancel their hotel reservations. The dataset includes bookings from two types of hotels (Resort Hotel and City Hotel) along with details such as booking time, number of guests, room type, country, and reservation status.

The main goal of this project is to identify patterns and factors that affect booking cancellations. It looks at things like how early the booking was made (lead time), changes in reservations, guest type (couples, singles, families), and room assignments. By studying these factors, the project helps hotels understand customer behavior.

## 2. Problem Statement

Hotel booking cancellations create challenges such as revenue loss, poor room utilization, and difficulty in planning hotel operations. Many hotels do not clearly understand which factors increase the likelihood of cancellations.

The problem addressed in this project is:

**How can hotels identify the key factors responsible for booking cancellations and use this information to reduce future cancellation rates?**

## 3. Objectives of the Project

The main objectives of this project are:

- To analyze hotel booking data and identify cancellation trends
- To understand customer behavior related to hotel bookings
- To find the major factors that influence booking cancellations
- To compare cancellation patterns between City Hotels and Resort Hotels
- To help hotels improve pricing, booking, and cancellation policies

## 4. Applications of the Project

This project can help hotels to:

- Predict and reduce future cancellations
- Improve revenue and room management
- Design better cancellation and refund policies
- Optimize pricing strategies
- Improve customer experience and satisfaction

## 5. Conclusion

This project successfully analyzes hotel booking cancellation data and identifies the major factors responsible for cancellations. The results show that lead time, booking changes, hotel type, and customer behavior play an important role in determining whether a booking will be canceled.