

# Summary of the Analysis

This analysis delivers a thorough examination of hotel booking data, focusing on trends, customer behavior, and actionable business insights. The data reveals pronounced seasonality, with booking volumes and cancellations peaking in April and reaching their lowest in February and November. Booking patterns indicate that customers show strong preferences for certain booking channels, room types, and star ratings, with a majority of bookings concentrated in these segments. Notably, while some customers are new, a significant proportion are repeat bookers, highlighting opportunities for loyalty initiatives.

Cancellation behavior is unevenly distributed, with higher rates observed in specific months, channels (such as web), room types (like standard), and among bookings with certain star ratings. Analysis suggests that customers who use coupons or receive higher cashback are more likely to cancel, indicating that promotional offers may attract more price-sensitive or less committed customers. Root cause analysis points to flexible cancellation policies, external factors (such as holidays, exams, or weather), and the nature of promotional incentives as primary drivers of these patterns.

To address these findings, several business recommendations are proposed. Stricter cancellation policies during peak periods and for high-risk segments, combined with targeted communication and incentives, can help reduce cancellations. Profitability and repeat bookings can be enhanced through loyalty programs, personalized marketing, and upselling premium services. Dynamic pricing strategies, optimized promotional spend, and regular channel performance reviews are recommended to maximize revenue and efficiency.

Additionally, the analysis suggests the value of advanced visualizations, predictive modeling, and customer segmentation to further refine business strategies. Ongoing monitoring and A/B testing are advised to ensure continuous improvement. Implementing these recommendations will enable the business to reduce cancellations, increase profitability, and build stronger, long-term customer relationships.