Hotel Booking Analysis Report

Dataset Overview

This dataset contains hotel booking data including variables like hotel type, lead time, country of origin, market segment, cancellation status, and average daily rate (ADR).

Objective

To analyze booking patterns and cancellation trends across countries, hotels, and time periods, with an emphasis on average daily rate (ADR) to assist with strategic decision-making for hotel revenue management.

1. Average Daily Rate (ADR) Trends for Canceled Bookings

ADR tends to fluctuate monthly.

ADR for canceled bookings is generally higher in summer months.

City hotels show more seasonal variation than resort hotels.

Decision Insight: City hotels might need better pricing strategies during peak months to reduce cancellations.

2. Top 10 Countries by Canceled Reservations

Portugal, United Kingdom, France, and Germany lead in cancellations.

A pie chart was created to visualize distribution.

Decision Insight: Targeted retention or pre-confirmation strategies may be helpful in these countries.

3. Market Segment Analysis

Most bookings come from 'Online TA' (Travel Agencies), followed by 'Offline TA/TO'.

Cancellations are more frequent in segments with higher ADR.

Decision Insight: Introduce stricter cancellation policies or incentives for direct bookings.

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4. Quarterly ADR Analysis

Q3 has the highest average ADR for both hotel types.

Resort hotels peak more in Q3; city hotels maintain consistent rates.

Decision Insight: Promotions in Q1 & Q2 could help balance revenue.

Recommendations

- Implement dynamic pricing models to optimize ADR based on seasonality.

- Focus on reducing cancellations from top canceling countries with targeted campaigns.

- Encourage direct bookings through loyalty programs to reduce dependency on OTA.

How to Use

This report can be uploaded to GitHub along with the Jupyter Notebook.

Use the .md version for rendering directly in GitHub or portfolio sites like GitHub Pages.