🏨 Hotel Business Analysis Dashboard – Power BI

This document explains the Power BI project focused on hotel business data analysis. It provides insights into hotel performance, revenue, occupancy trends, and customer segmentation. The dashboard supports strategic decision-making through interactive data visualizations and derived metrics.

# 📁 Project Files

- Hotel\_dashboard.pbix – The Power BI file containing the full dashboard and DAX measures.

- data/ – Folder containing the source datasets used for this analysis.

- metrics\_created.md – A markdown file listing all new DAX metrics/measures created for this project.

# 📊 Dashboard Highlights

The Power BI dashboard is structured around key hotel performance indicators. It includes:

- Revenue Overview – Total revenue, revenue by room type, and revenue by channel.

- Occupancy Analysis – Occupancy rate trends, booking status, and cancellation patterns.

- Customer Demographics – Segmentation by nationality, type of guest, and stay duration.

- Monthly Trends – Booking trends over time, peak seasons, and length of stay analysis.

- KPI Cards – High-level performance metrics like ADR (Average Daily Rate), occupancy rate, and cancellation rate.

# 🧮 Key Metrics Created

The following DAX measures were created to support in-depth analysis:

* - Total Revenue
* - Average Daily Rate (ADR)
* - Occupancy Rate
* - Total Bookings
* - Cancellation Rate
* - Length of Stay
* - Revenue per Booking
* - Weekend vs Weekday Bookings
* - Booking Lead Time
* - Repeat Guest %

📌 A full list with formulas is provided in the `metrics\_created.md` file.

# 🧠 Insights Derived

- Booking Patterns: Peak bookings happen between [Insert months if known], with a high percentage of cancellations during [Insert peak cancel period].

- Revenue Sources: Most revenue comes from [Direct bookings/Online travel agents/etc.].

- Guest Behavior: Majority of guests are [Family/Business/Leisure] travelers, preferring [room types].

- Improvement Areas: Notable revenue loss due to high cancellation rate and low occupancy in off-seasons.

# 🛠 Tools Used

- Power BI Desktop

- DAX (Data Analysis Expressions)

- Power Query for ETL

- Excel / CSV as data source (if applicable)

# 📌 How to Use

1. Clone this repository.

2. Open `Hotel\_dashboard.pbix` in Power BI Desktop.

3. Explore the dashboard visuals and customize filters as needed.

4. Check `metrics\_created.md` for understanding custom logic and KPIs.

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