AtliQ Grands - Hospitality Analysis

📌 Objective

To analyze booking, revenue, occupancy, and performance trends across AtliQ's hotel properties in various cities using datasets like `fact_bookings`, `fact_aggregated_bookings`, `dim_rooms`, `dim_hotels`, and `dim_date`. The aim is to generate actionable insights for improving operational efficiency and business outcomes in the hospitality domain.

🔍 Key Insights

1. **Room Category Occupancy Rates**
    - **Presidential rooms** had the highest average occupancy (≈ 59.3%).
    - All room types (Standard, Premium, Elite, Presidential) hovered around 58–59% occupancy on average.
2. **City-wise Occupancy**
    - **Delhi** had the highest average occupancy rate (≈ 61.6%), followed by **Hyderabad**, **Mumbai**, and **Bangalore**.
3. **Weekday vs. Weekend Trends**
    - **Weekend occupancy** was significantly higher (**72.39%**) than weekdays (**50.90%**), indicating stronger leisure demand.
4. **June Monthly Occupancy by City**
    - In **June**, Delhi again led with **62.47%**, followed by Hyderabad (58.46%), Mumbai (58.38%), and Bangalore (56.58%).
5. **Revenue Realized per City**
    - **Mumbai** generated the highest realized revenue (₹668M+), followed by **Bangalore**, **Hyderabad**, and **Delhi**.

6. **Booking Platform Usage**
    - Top platforms: **Others**, **Makeyourtrip**, and **Logtrip**.
    - Direct bookings (online/offline) made up a smaller share comparatively.
7. **Overbooked Instances**
    - Several properties experienced bookings **exceeding capacity**, e.g., Property 17558 with 30 bookings vs. 19 capacity, and others.
8. **Data Cleaning Issues Identified**
    - **Negative guest counts** and **outlier revenue values** were found and cleaned.
    - Bookings with revenue over ₹2.94L (statistical outlier) were flagged and removed.

📊 Visualizations Used

- **Bar Charts**
    - Booking platforms distribution
    - Average occupancy per city (especially for June)
- **Descriptive Statistics**
    - Summary metrics for numerical columns.
- **Time-Based Analysis**
    - Trends across weekdays vs. weekends
- **Occupancy Calculation**
    - Calculated `OCC_Pct` to derive room utilization.
- **Data Merges**

- Combined datasets using `property_id` and `check_in_date` for comprehensive insights.

✅ Recommendations

1. **Improve Weekday Occupancy**
    - Run mid-week promotional campaigns or offer business traveler discounts to improve weekday performance.
2. **Capacity Management**
    - Address properties that consistently exceed capacity to avoid overbooking and guest dissatisfaction.
3. **Optimize Platform Usage**
    - Encourage more **direct bookings** by offering loyalty rewards or exclusive discounts, reducing commission costs.
4. **City-Based Strategy**
    - Invest more in high-performing cities like **Delhi and Mumbai**, and investigate reasons for lower performance in **Bangalore**.
5. **Refine Room Category Strategy**
    - Since **Presidential rooms** show relatively better performance, explore bundling or upselling strategies for these room types.
6. **Data Hygiene**
    - Implement stricter validation at the data entry point to prevent negative guest counts or improbable revenue values.
7. **Expand August Data Integration**
    - Ensure new monthly datasets are routinely appended and harmonized to support continuous analysis.