Case Study: Atliq Grands Hotels Revenue Analysis

Name: Md Sahil

Date: March 2023

Introduction:

Our case study is based on a Hotel business Atliq Grands. AtliQ Grands owns multiple five-star hotels across India. They have been in the hospitality industry for the past 20 years. Due to strategic moves from other competitors and ineffective decision-making in management, AtliQ Grands are losing its market share and revenue in the luxury/business hotels category. As a strategic move, the managing director of AtliQ Grands wanted to incorporate "Business and Data Intelligence" to regain their market share and revenue.

Their revenue management team provide their historical data to analyst team to analyze and discover meaningful insight.

PHASE 1: Asking the right question and Identifying business task

Stakeholders:

Revenue management team of Atliq Grands.

Goal:

1. Create the metrics according to the metric list.
2. Create a dashboard according to the mock-up provided by stakeholders.
3. Create relevant insights that are not provided in the metric list/mock-up dashboard
4. Focus on week to week change of key Metric.
5. Most important key metric that clients most focused on Revenue, Ocuupancy%, ADR(Average Daily rate), RevPAR(Revenue Per Available Room), DSRN(Daily Sellable Room Nights)

PHASE 2: Preparing the Data

Data source:

Data and metric are given by CodeBasic in CSV file and excel file respectively. Metadata is given txt file. Also, Mockup dashboard is given in png file.

Data details:

Data is given by CodeBasic in CSV. There are 5 CSV files. There are 3 months data From May 2022 to June 2022.

Metadata described in the following given link:

https://github.com/mdsahilmca20/PortfolioProjects/blob/main/CodeBasic/Atliq%20Grand%20Hotel%20Revenue%20Analysis/meta_data_hospitality.txt

Some of the key metric details from the given metrics given below:

Measures	Description / Purpose
Revenue	To get the total revenue_realized
Occupancy %	Occupancy means total successful bookings happened to the total rooms available(capacity)
Average Rating	Get the average ratings given by the customers
Cancellation %	calculating the cancellaton percentage.
No Show rate %	calculating the no show percentage.
ADR	Calculate the ADR(Average Daily rate) It is the ratio of revenue to the total rooms booked/sold. It is the measure of the average paid for rooms sold in a given time period
Realisation %	calculate the realisation percentage. It is nothing but the succesful "checked out" percentage over all bookings happened.
RevPAR	Calculate the RevPAR(Revenue Per Available Room) RevPAR represents the revenue generated per available room, whether or not they are occupied. RevPAR helps hotels measure their revenue generating performance to accurately price rooms. RevPAR can help hotels measure themselves against other properties or brands.
DBRN	calculate DBRN(Daily Booked Room Nights) This metrics tells on average how many rooms are booked for a day considering a time period

DSRN	calculate DSRN(Daily Sellable Room Nights) This metrics tells on average how many rooms are ready to sell for a day considering a time period
DURN	calculate DURN(Daily Utilized Room Nights) This metric tells on average how many rooms are succesfully utilized by customers for a day considering a time period

PHASE 3 & 4: Process and Analyzing the Data

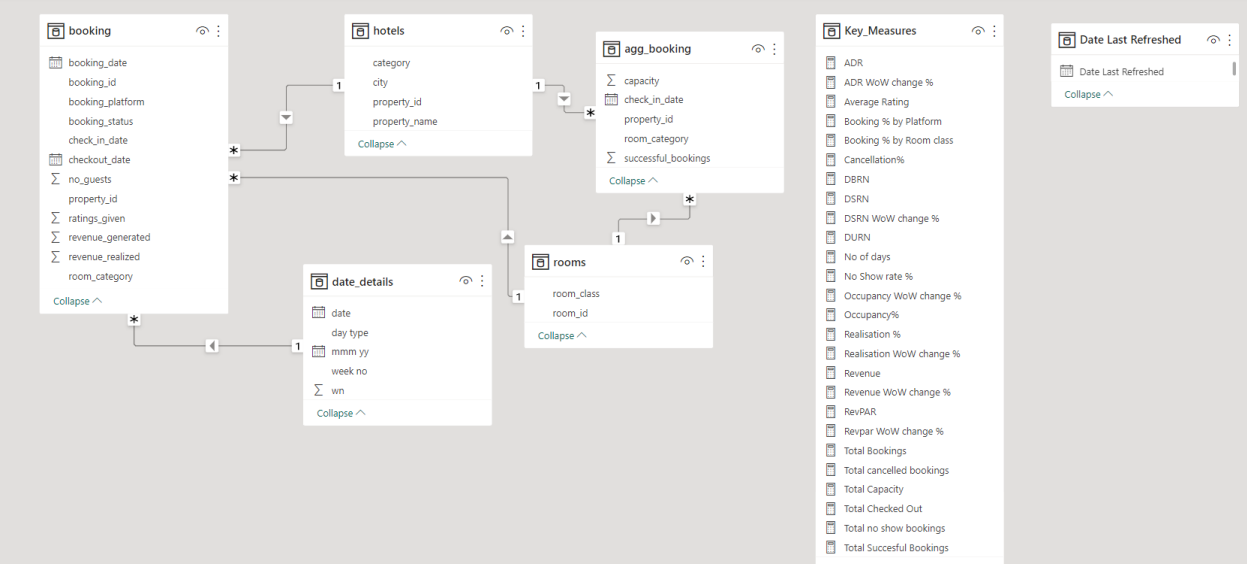
For the cleaning and transforming process I used Python in Jupiter notebook and creating calculating measure in PowerBI using DAX language. And also modeled the data in powerBI. The following steps were taken:

1. Checking for Null data and no null data found.
2. Checking for duplicate data and no duplicate data are found.
3. Creating a new column **wn** in **dim_date** table to get the week number from the corresponding date.
4. Removing day_type column from dim_data as in our study Friday and Saturday are considered as weekend and others are considered as weekday. After removing the column create the same column where Friday and Saturday are considered as weekend and weekdays are from Sunday to Thursday.
5. Creating heatmaps to check for correlation.
6. Creating other charts in Jupiter notebook to analyze and understand the data.
7. After that load the cleaned final into powerBI.
8. Creating all measures in PowerBI using DAX which are given by client.
9. After that Create data model in powerBI.

Full Data cleaning and transform which have done in Jupiter notebook given in the following link:

https://github.com/mdsahilmca20/PortfolioProjects/blob/main/CodeBasic/Atliq%20Grand%20Hotel%20Revenue%20Analysis/HotelRevenueEDA.ipynb

Data model is given below:



PHASE 5 & 6: Visualizations and Act

I used PowerBI to run further analysis and generate visualizations that support the key findings in the analysis.

For full visualization and key findings follow the link:

https://www.novypro.com/project/atliq-grand-hotel-revenue-analysis