



PYTHON PROJECT HOSPITALITY ANALYSIS

Find Insights

Agenda

- ❖ About The Company
- ❖ Problem Statement
- ❖ Objective
- ❖ Datasets
- ❖ Insights
- ❖ Recommendations

AtliQ Grands

AtliQ Grands is a premier luxury hospitality brand that owns and operates a chain of five-star hotels across major cities in India.

With a strong legacy spanning over 20 years, AtliQ Grands has established itself as a trusted name in the hospitality industry, known for its world-class service, elegant design, and exceptional guest experiences.

The company's portfolio includes flagship properties in key metropolitan and tourist destinations, catering to both business and leisure travelers.

Driven by a commitment to excellence and innovation, AtliQ Grands continues to set new benchmarks in luxury and customer satisfaction across the Indian hospitality landscape.

AtliQ Hotels



AtliQ Seasons

AtliQ Exotica



AtliQ Bay

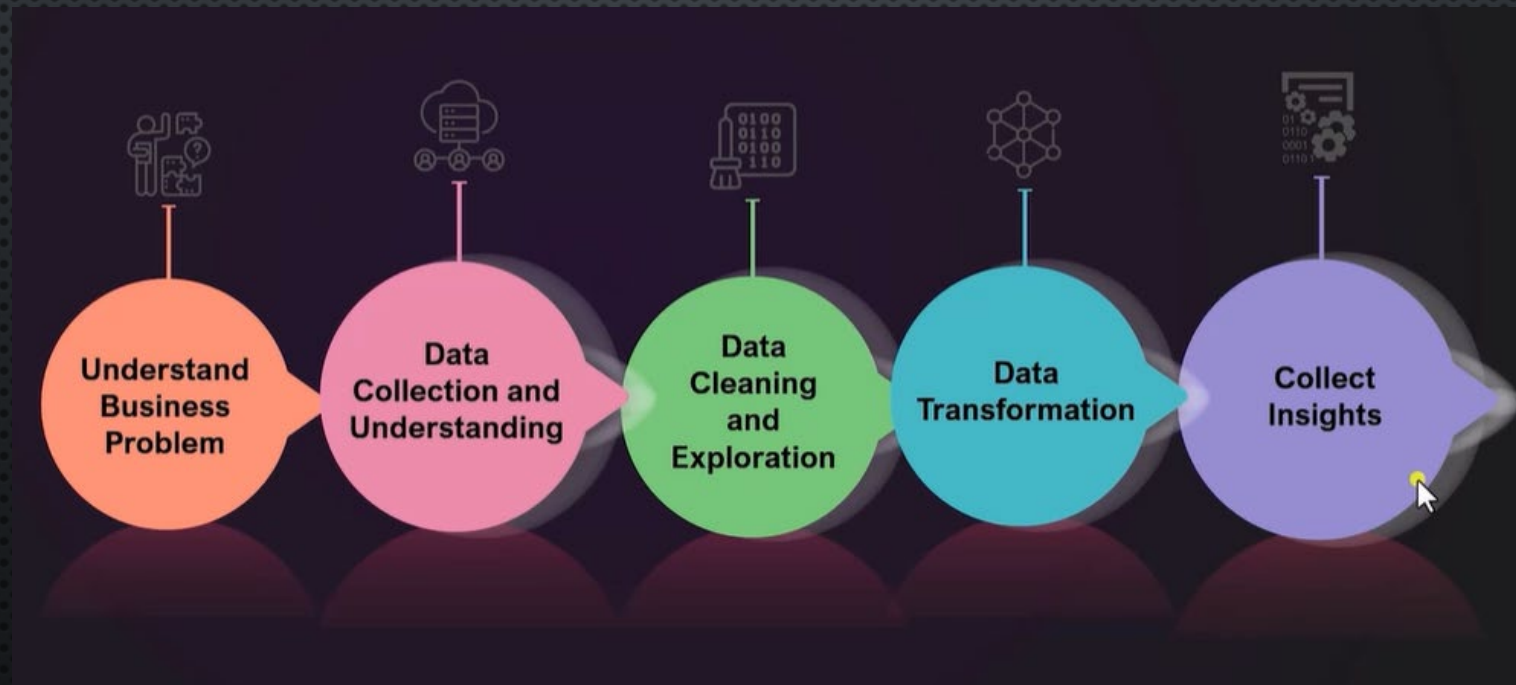
AtliQ Palace

Problem Statement

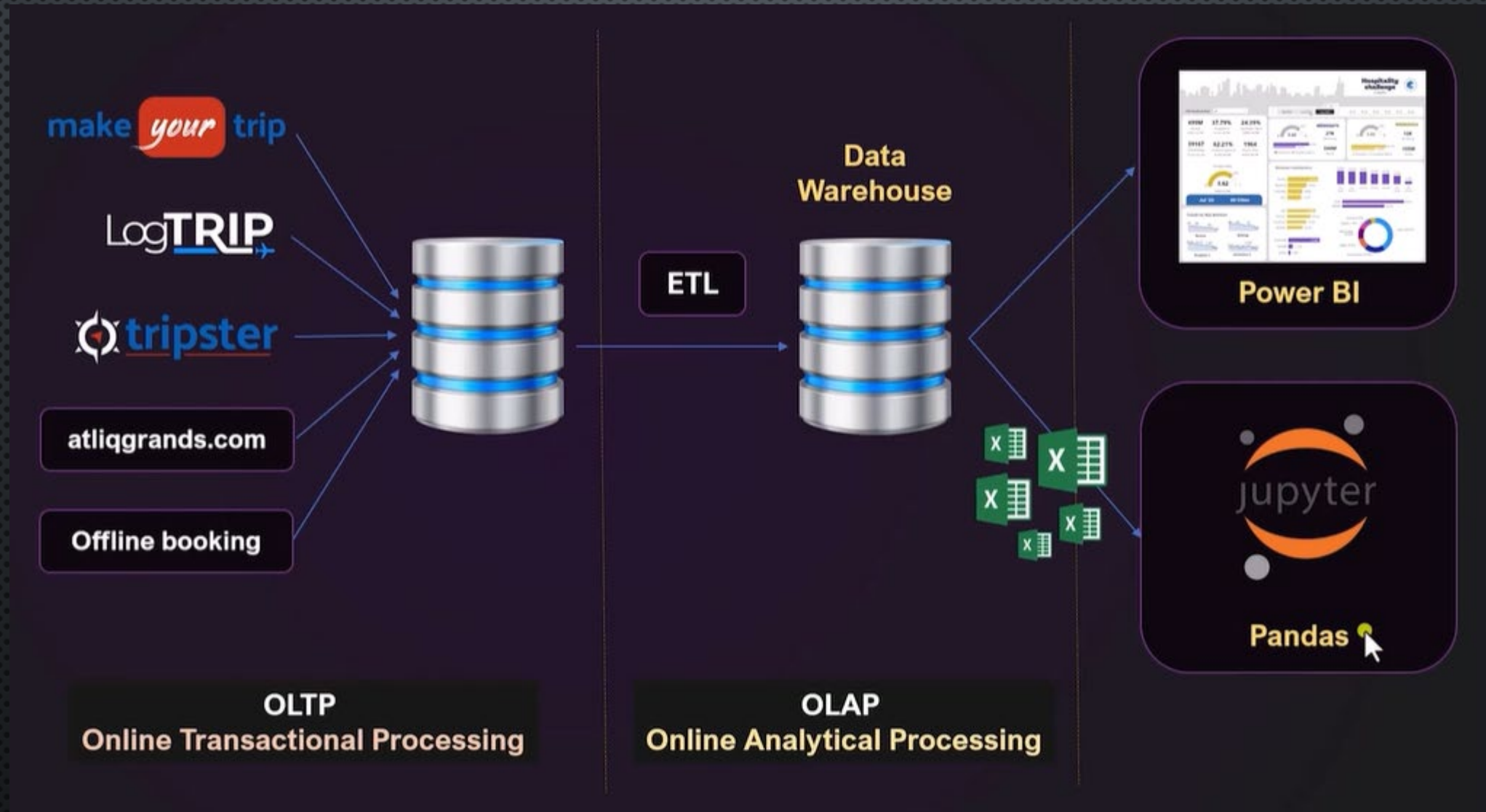
- ❑ AtliQ Grands is a company with 20 years of experience in Hotel Industry. It was losing its market share and revenue due to strategic moves from other competitors and ineffective decision-making in management.
- ❑ The company wants to incorporate Business Intelligence and Data Analytics to regain its market share and revenue.

Objective

- ❑ Create a python project for analysis.
- ❑ Create a presentation detailing the insights and recommendations.
- ❑ Present the insights before the client.



Data Pipeline



Datasets



dim_date



dim_hotels



dim_rooms



fact_aggregated_bookings



fact_bookings



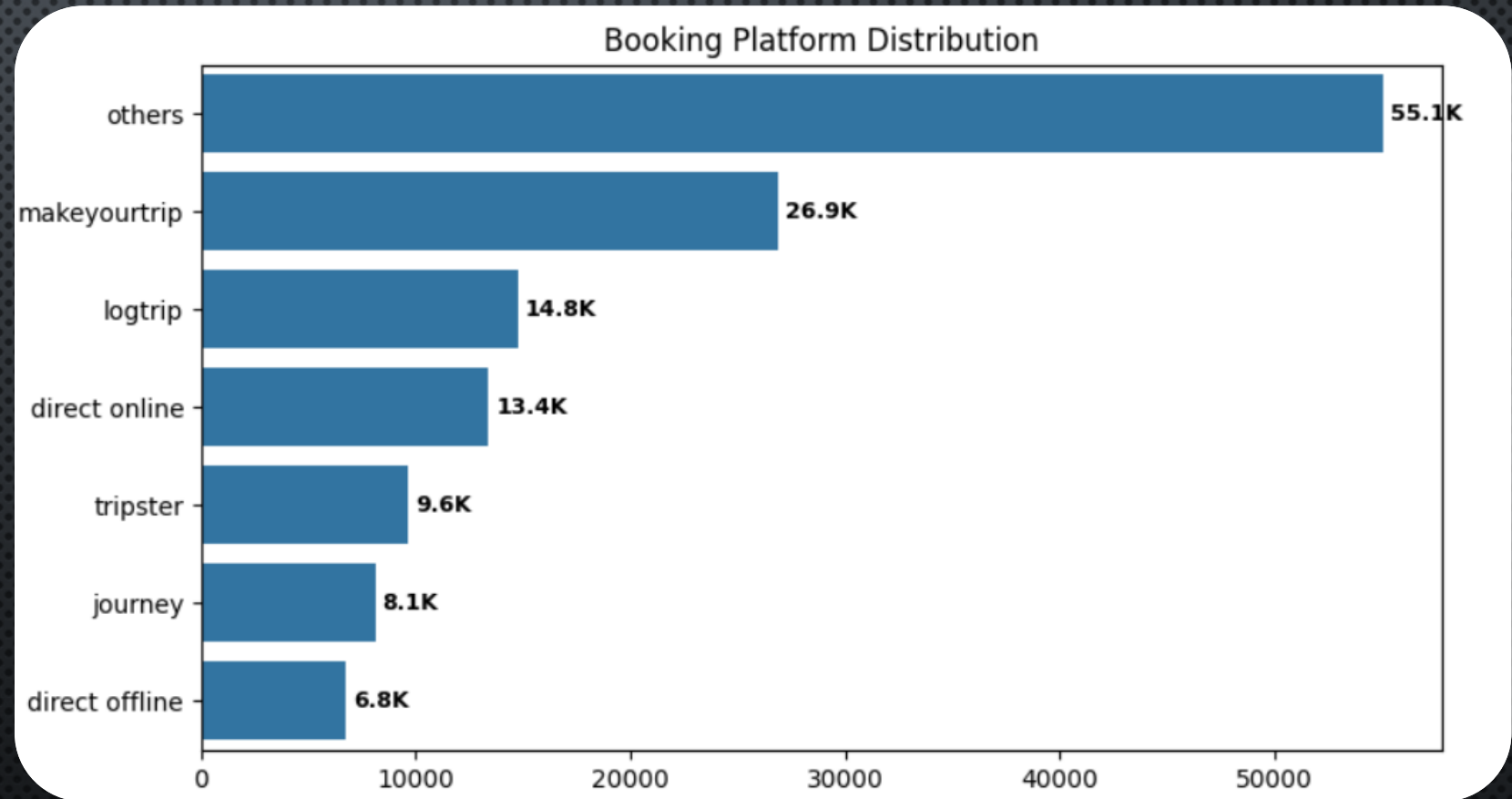
new_data_august

Insights:

What booking platforms are preferred for booking?

Underperforming Room
Class: **Standard**

High Performing
Platforms:
1. MakeYourTrip
2. Others

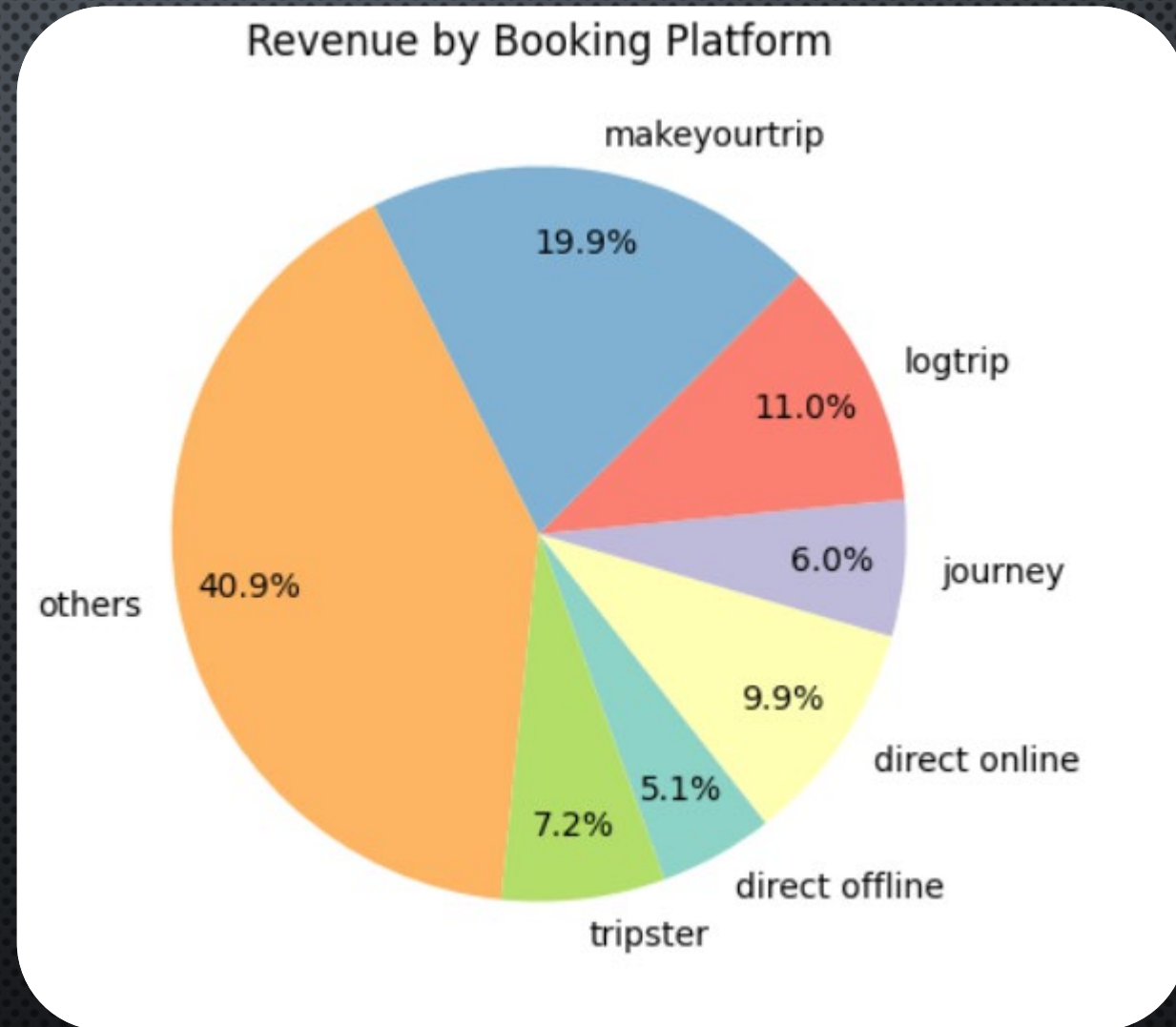


Insights:

Revenue Realized per
Booking Platform ?

Highest Revenue:
makeyourtrip

Lowest Revenue:
direct offline



Recommendations:

As per May 2022-July 2022 data.

- **Short-term:** Leverage OTAs (like MakeYourTrip) because they drive the majority of traffic and revenue.
- **Long-term:** Invest in **direct online** to improve profitability → offer loyalty perks, app-exclusive discounts, smoother UX.
- **Hybrid strategy:** Use OTAs for **acquisition** but design campaigns (email, app, offers) to **convert OTA customers into direct customers** in future.

- Investigate what constitutes “**Others**” → if it includes valuable niche channels, consider consolidating them or making targeted partnerships.
- Strengthen collaboration with **MakeYourTrip** since it’s already a strong contributor — negotiate for better visibility, promotions, or commission rates.
- For **low-performing channels** (Direct Offline, Journey), analyze whether the cost of maintaining them is justified — either optimize or reallocate marketing spend to better-performing platforms.

Insights:

What is the Average Occupancy rate in each room class ?

Underperforming Room Class:
Standard

High Performing Room Class:
Presidential

```
: df.groupby("room_class")["occ_pct"].mean().round(2)
:
room_class
Elite      58.01
Premium    58.03
Presidential 59.28
Standard   57.89
Name: occ_pct, dtype: float64
```


Recommendations:

→ Standard:

- Maintain it as the **volume anchor** of the portfolio.
- Focus on **service consistency and affordability** to ensure stable demand.
- Use it as a **customer acquisition funnel** (guests who first book Standard can later be nurtured into Premium/Elite loyalty).

→ Premium & Elite:

- Protect these as **high-margin categories**.
- Upsell some Standard guests here, but without undermining Standard demand.

→ Presidential:

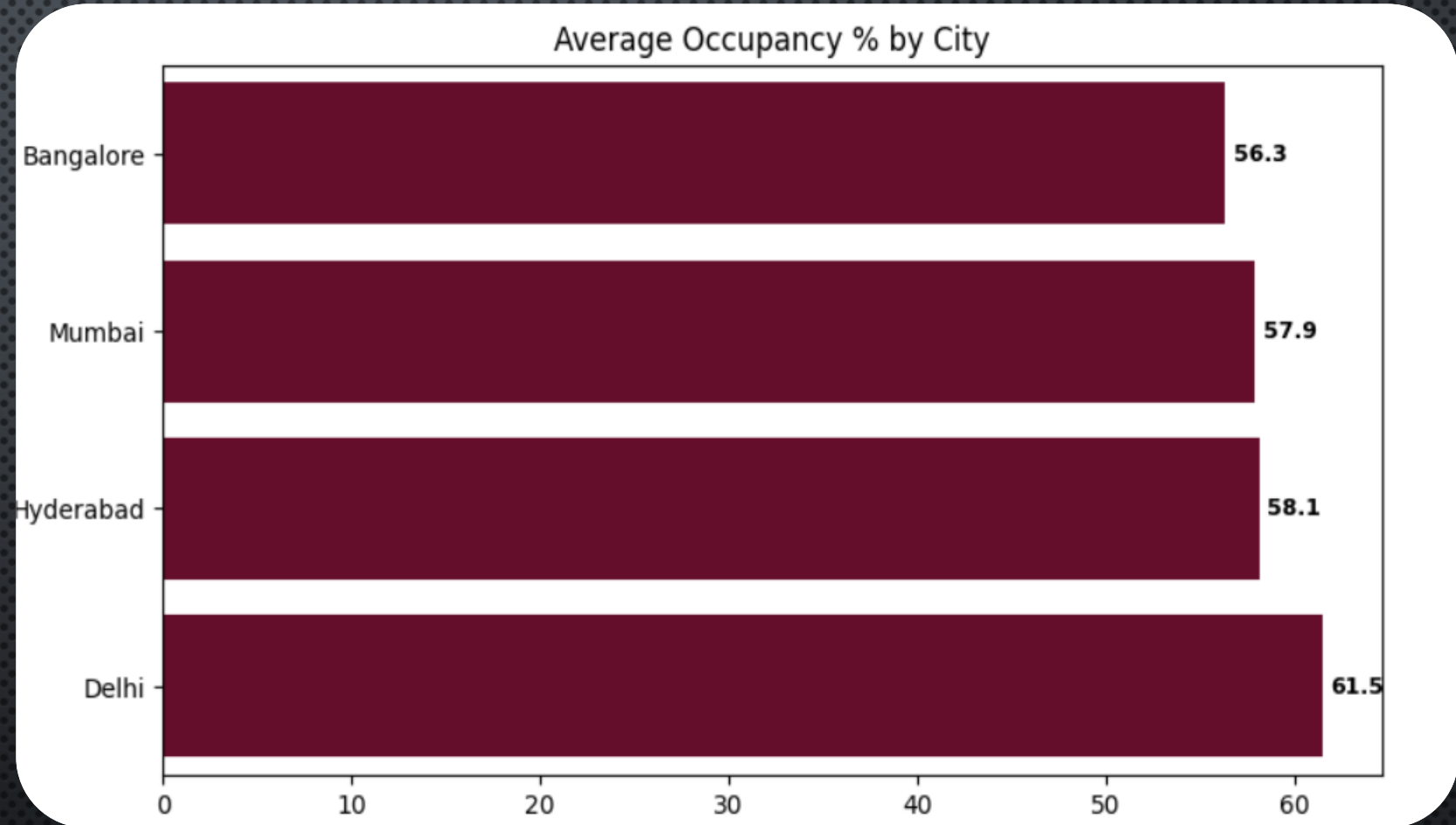
- Since it's already achieving higher-than-expected occupancy, consider whether demand can sustain slightly higher ADR or exclusive bundled offers.
- But do not dilute exclusivity — it's a **flagship prestige category**.

Insights:

What is the Average
Occupancy rate per City ?

Underperforming City:
Bangalore

High Performing City:
Delhi

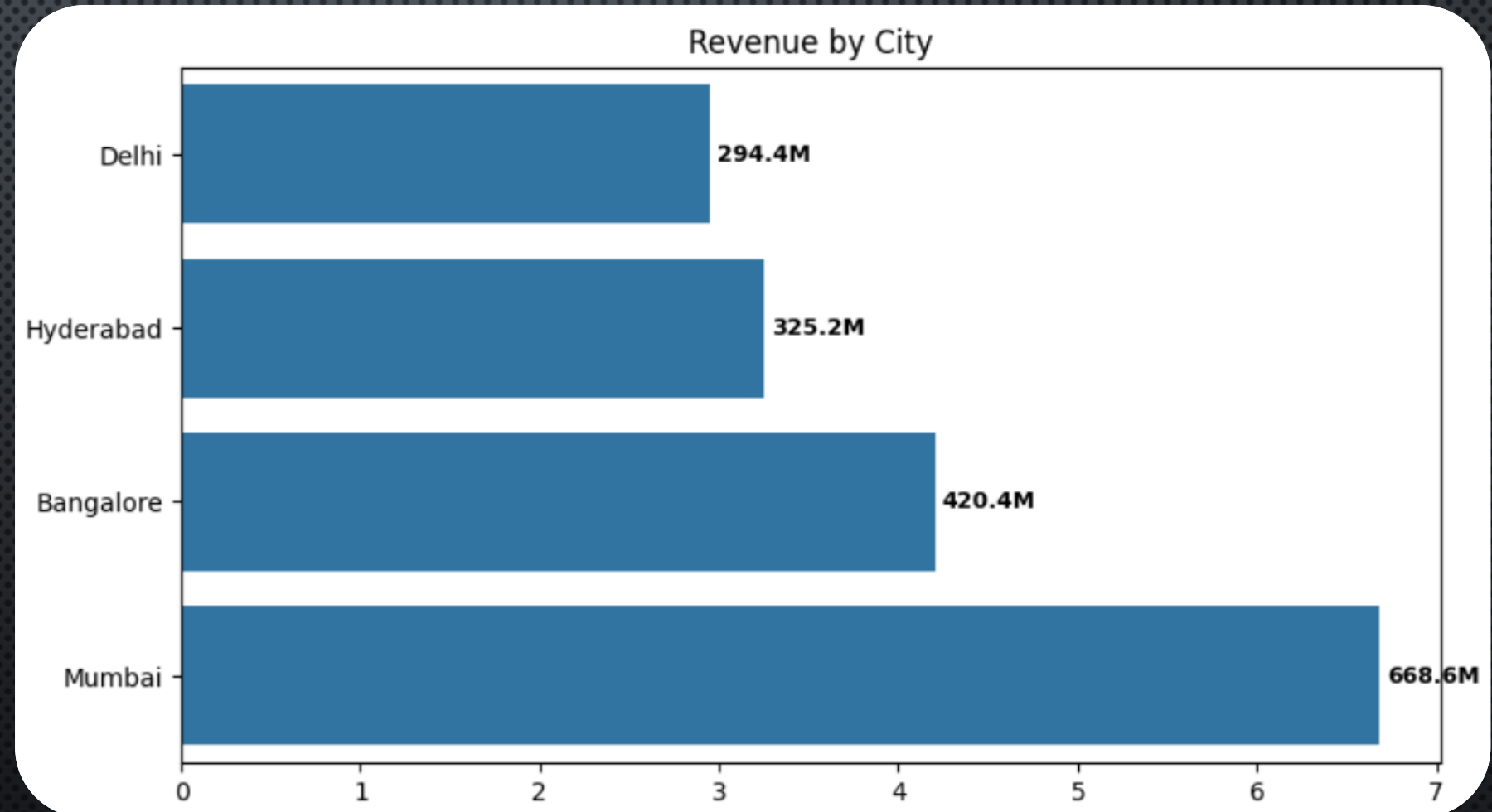


Insights:

What is the revenue realized per city ?

Highest Revenue:
Mumbai

Lowest Revenue:
Delhi



Insights:

Average ratings per City

Highest Rated City:
Delhi

Lowest Rated City:
Bangalore

```
df_bookings_all.groupby("city")["ratings_given"].mean().round(2).sort_values(ascending = False)
```

```
city
Delhi      3.78
Hyderabad  3.66
Mumbai     3.65
Bangalore  3.41
Name: ratings_given, dtype: float64
```


Recommendations:

As per May 2022-July 2022 data.

→ **Delhi:** Market the **higher satisfaction scores** to attract more guests and explore ways to convert strong ratings into higher ADR (premium pricing justified by guest satisfaction).

→ **Mumbai:** Maintain demand leadership but invest in improving guest experience → a small lift in ratings could strengthen loyalty and retention.

→ **Hyderabad:** Balanced performer — could be improved with targeted brand campaigns and slight ADR optimization.

→ **Bangalore:** Needs urgent action:

- Improve service quality (since rating is weakest).
- Run quality audits, staff training, and operational fixes.

Insights:

Occupancy: Weekday vs Weekend

Highest Occupancy:
Weekend

```
df.groupby("day_type")["occ_pct"].mean().round(2)
```

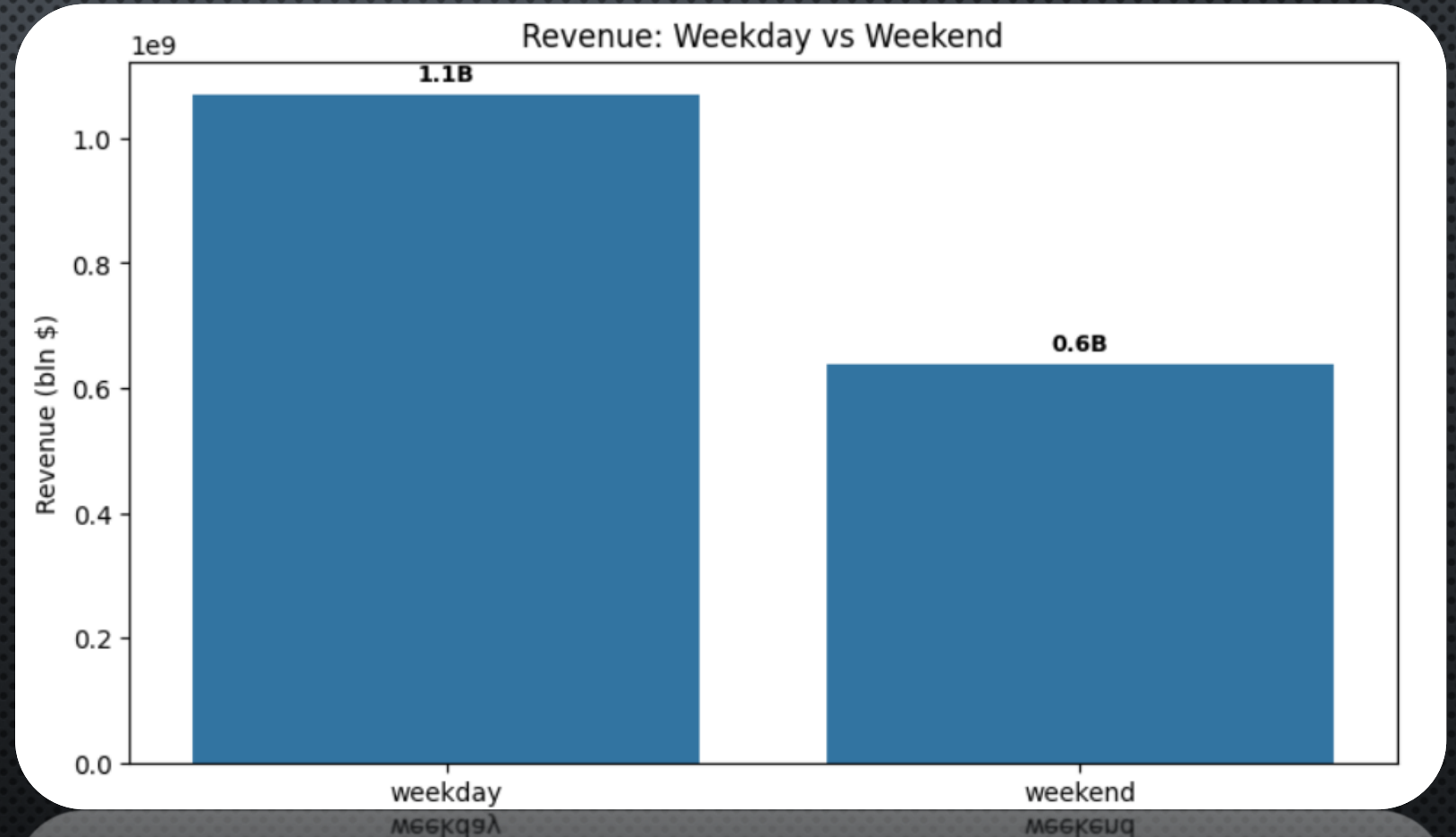
```
day_type
weekday    51.81
weekend    73.96
Name: occ_pct, dtype: float64
```

```
name: occ_pct, dtype: float64
```


Insights:

Revenue: Weekday vs Weekend

Highest Revenue:
Weekday



Why this could be happening?

→ Pricing difference (ADR – Average Daily Rate):

- On weekdays, business travelers and corporates book higher-priced rooms (Elite, Premium).
- On weekends, hotels may run discounts to attract leisure travelers, filling more rooms but at lower rates.

WHY ?

→ Corporate contracts & events:

- Weekdays often see **conferences, business travel, and events**, which are high-paying.
- Weekends bring **families and leisure travelers**, who are more price-sensitive.

Recommendations:

As per May 2022-July 2022 data.

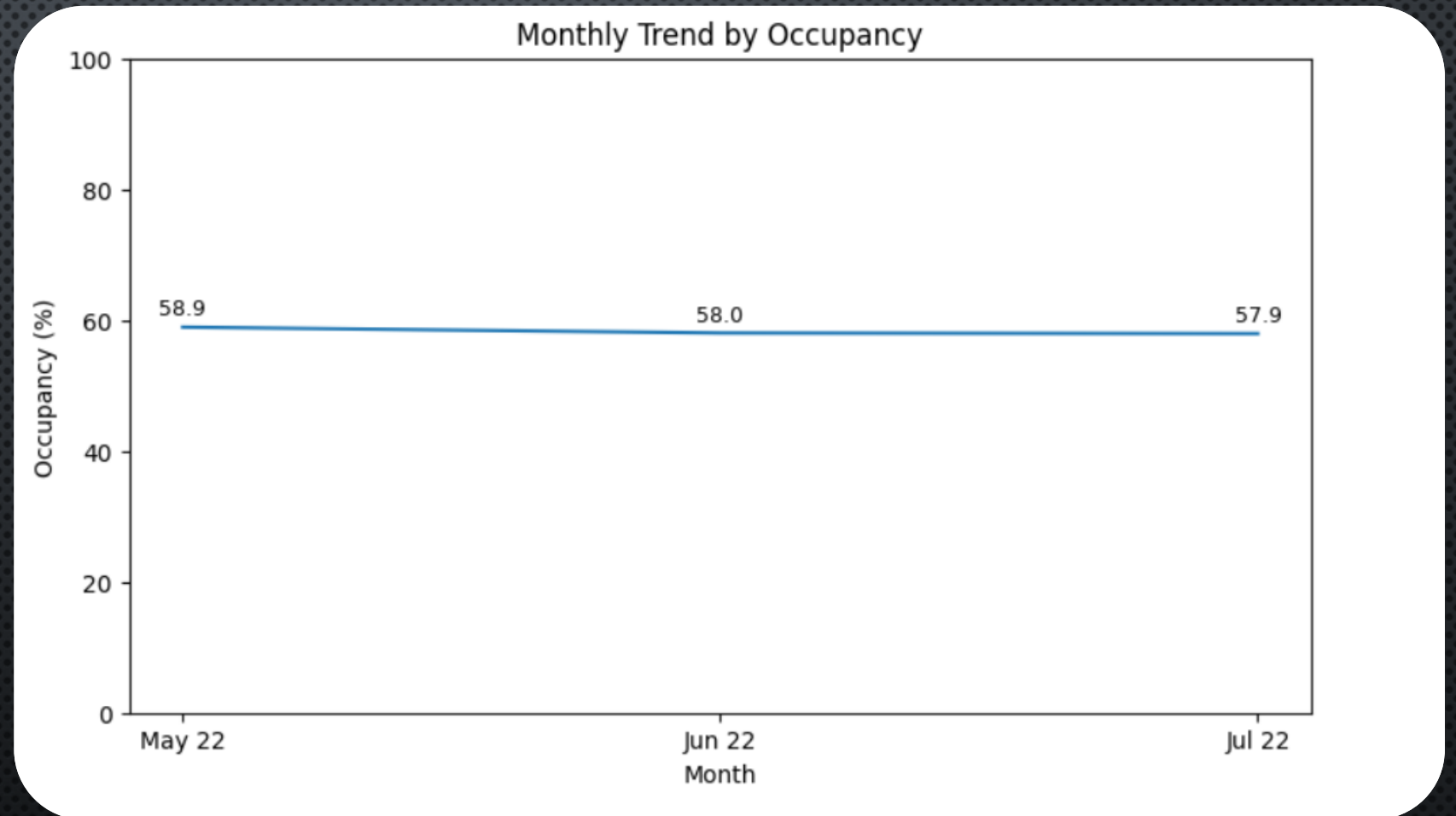
- Maintain premium weekday strategy:
Continue targeting corporate/business travel with strong weekday pricing.
- Increase weekend yield:
 - Instead of heavy discounts, introduce **bundled offers** (spa + dining + late checkout).
 - Upsell Standard weekend guests into Premium/Elite packages.
- Balance occupancy vs revenue:
High occupancy with low revenue isn't sustainable. Focus on **RevPAR (Revenue per Available Room)** instead of just occupancy %.

Insights:

Average Occupancy % is stable but declining.

Highest In:
May

Lowest In:
July

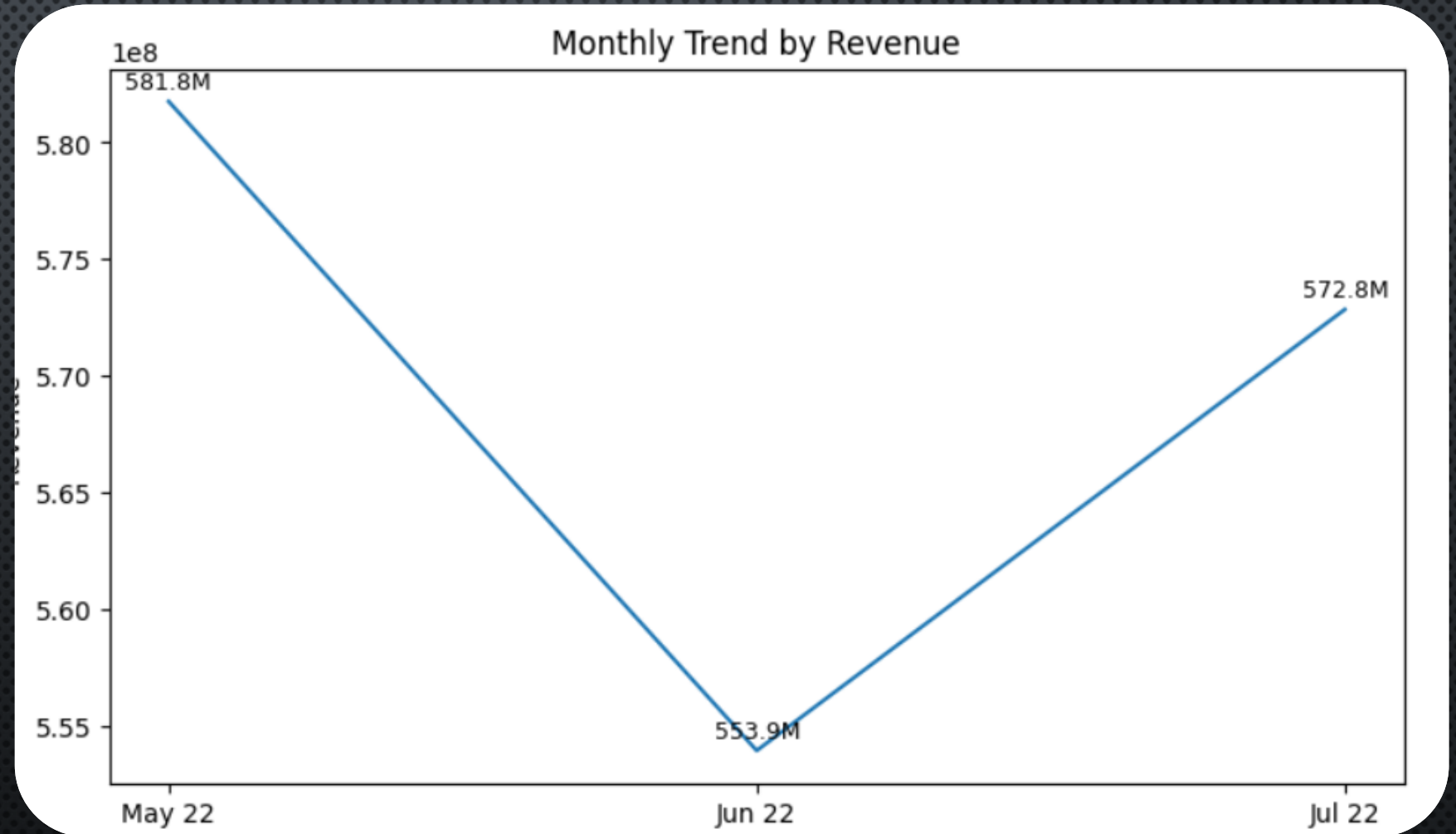


Insights:

Monthly Trend by Revenue

Highest In:
May

Lowest In:
June



Recommendations:

As per May 2022-July 2022 data.

→ **Stop chasing occupancy % alone.**

Focus on **RevPAR (Revenue per Available Room)** = $ADR \times \text{Occupancy}$.

→ **June strategy check:**

- Don't over-discount just to keep occupancy stable.
- Push upselling or experience bundles to protect revenue.

→ **July example:**

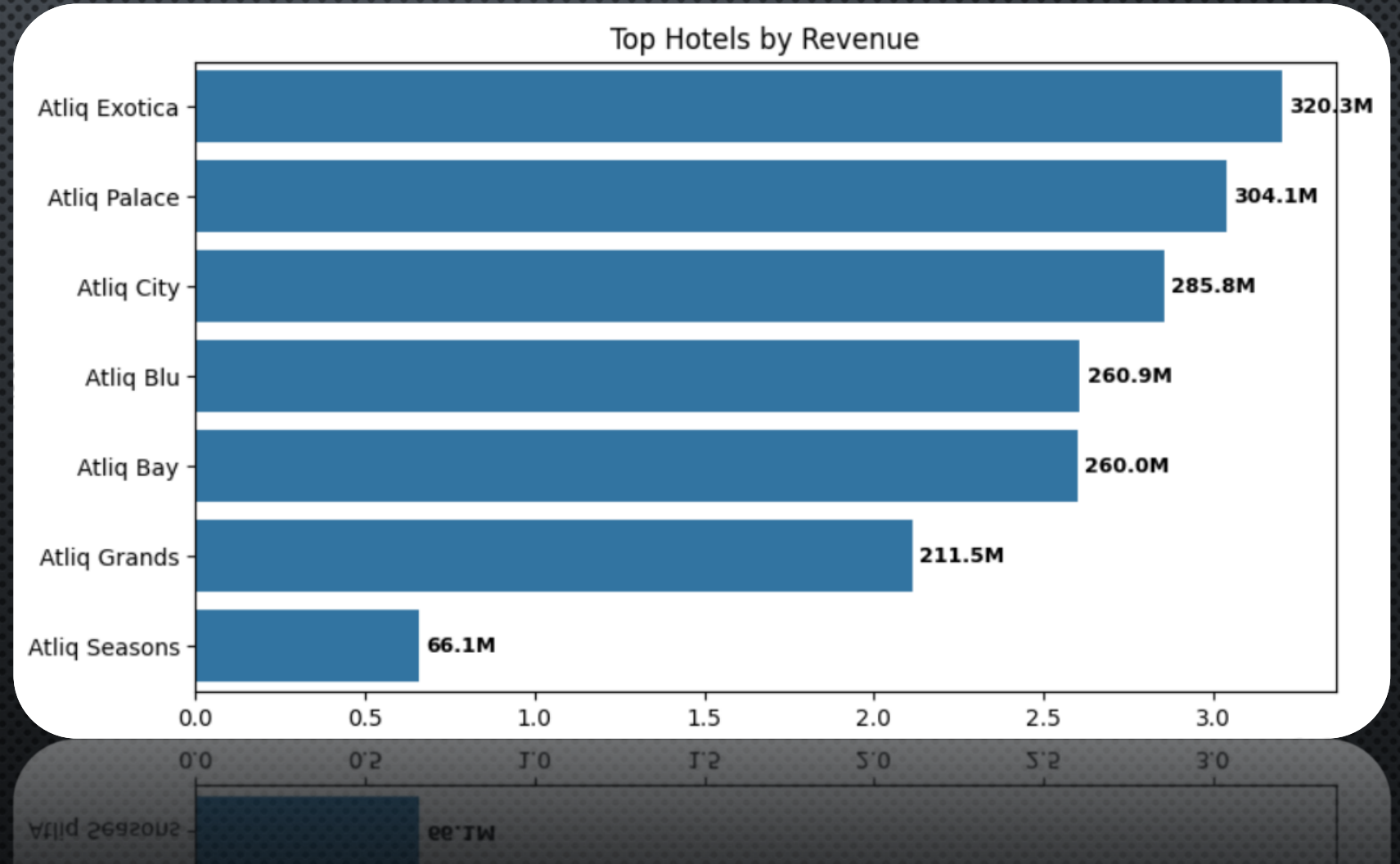
Even with slightly lower occupancy, revenue rose → showing that **better pricing & room mix optimization** is more valuable than just filling rooms.

Insights:

Revenue Realized per Hotel Type ?

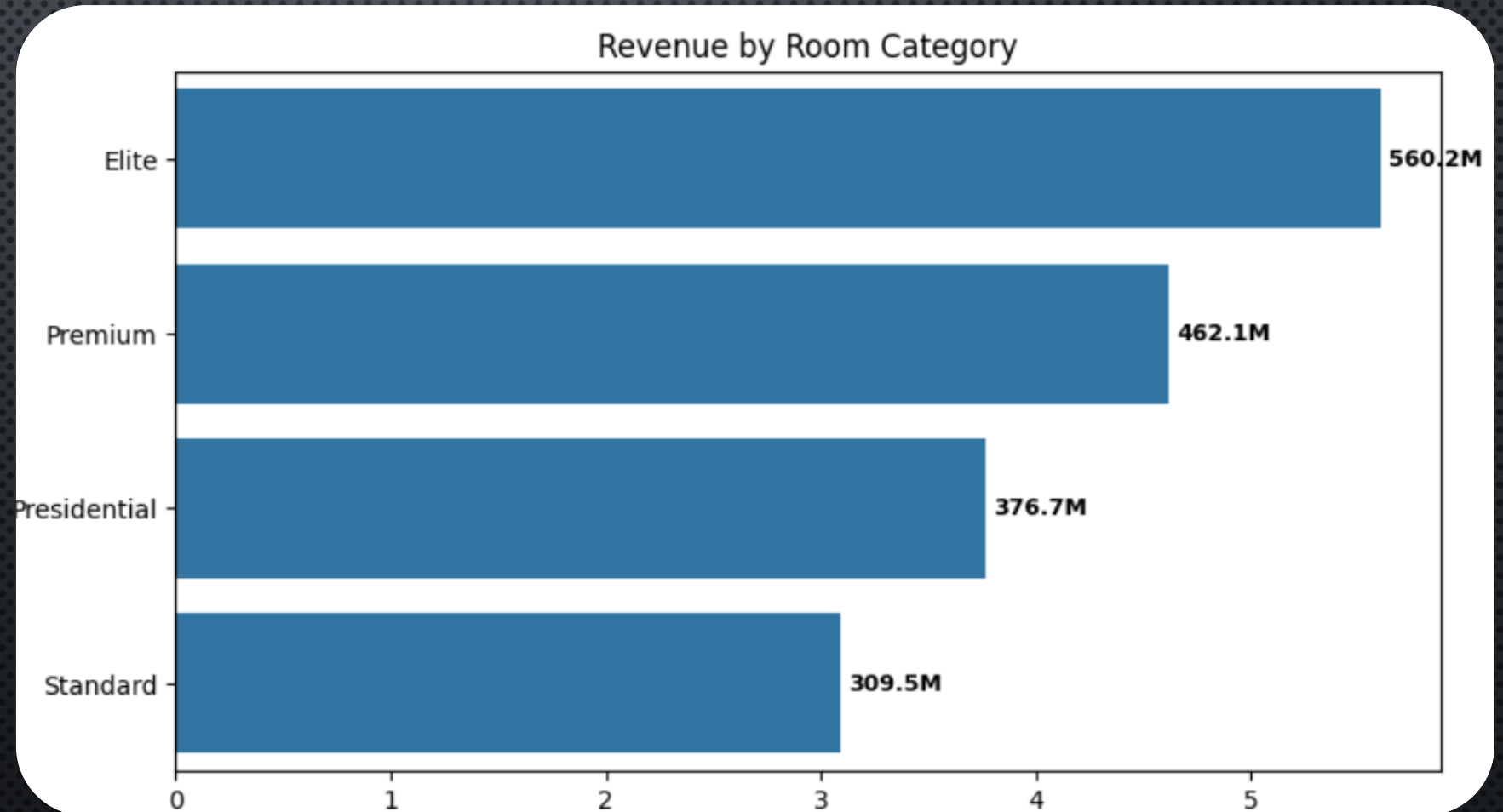
Highest Revenue:
AtliQ Exotica

Lowest Revenue:
AtliQ Seasons



Insights:

Revenue Realized per Room Category:



Highest Revenue:
Elite Rooms

Lowest Revenue:
Standard Rooms

Recommendations:

As per May 2022-July 2022 data.

- **Keep Presidential premium** → Don't cut prices; instead, maintain its exclusivity.
- **Leverage for branding** → Feature Presidential rooms in marketing materials to attract aspirational customers (even if they book Premium/Elite instead).
- **Focus on Elite & Premium for growth** → These are where real volume-driven revenue lies.
- **Use Standard as feeder** → Upsell Standard → Premium upgrades. Standard rooms bring **volume and customer acquisition** (entry point for price-sensitive customers).

Conclusion

Key Findings:

Revenue Trends: Revenue dipped in June despite stable occupancy (~58%), highlighting that **pricing & room mix drive revenue more than occupancy %**.

Occupancy Patterns: Occupancy remained flat month-to-month (~58%), with **weekend occupancy higher** but **weekend revenue stronger** (Luxury Rooms)

Room Categories:

- **Standard:** Stable, backbone for mass demand.
- **Premium & Elite:** Main revenue contributors.
- **Presidential:** Higher-than-expected occupancy, reinforcing its prestige role.

Cities:

- **Delhi:** Highest occupancy & ratings, but lowest revenue → strong efficiency, weaker scale.
- **Mumbai:** Revenue leader due to scale, but only mid-level on occupancy & ratings.
- **Hyderabad:** Balanced in both metrics.
- **Bangalore:** Weakest across occupancy, revenue, and ratings.

Implications

- Focusing only on **occupancy % is misleading**; the business must track **RevPAR and ADR**.
- **Weekend pricing strategy is flat**, leading to underutilized revenue opportunities despite high demand.
- **City-level differences** show that strategies must be **localized**: Delhi needs pricing leverage, Mumbai needs guest experience upgrades, Bangalore needs both demand stimulation and service improvement.

Thank you

For feedback and suggestions feel free to connect me with me on:



[LinkedIn](#)



[Github](#)

Or email me directly at:

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