



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

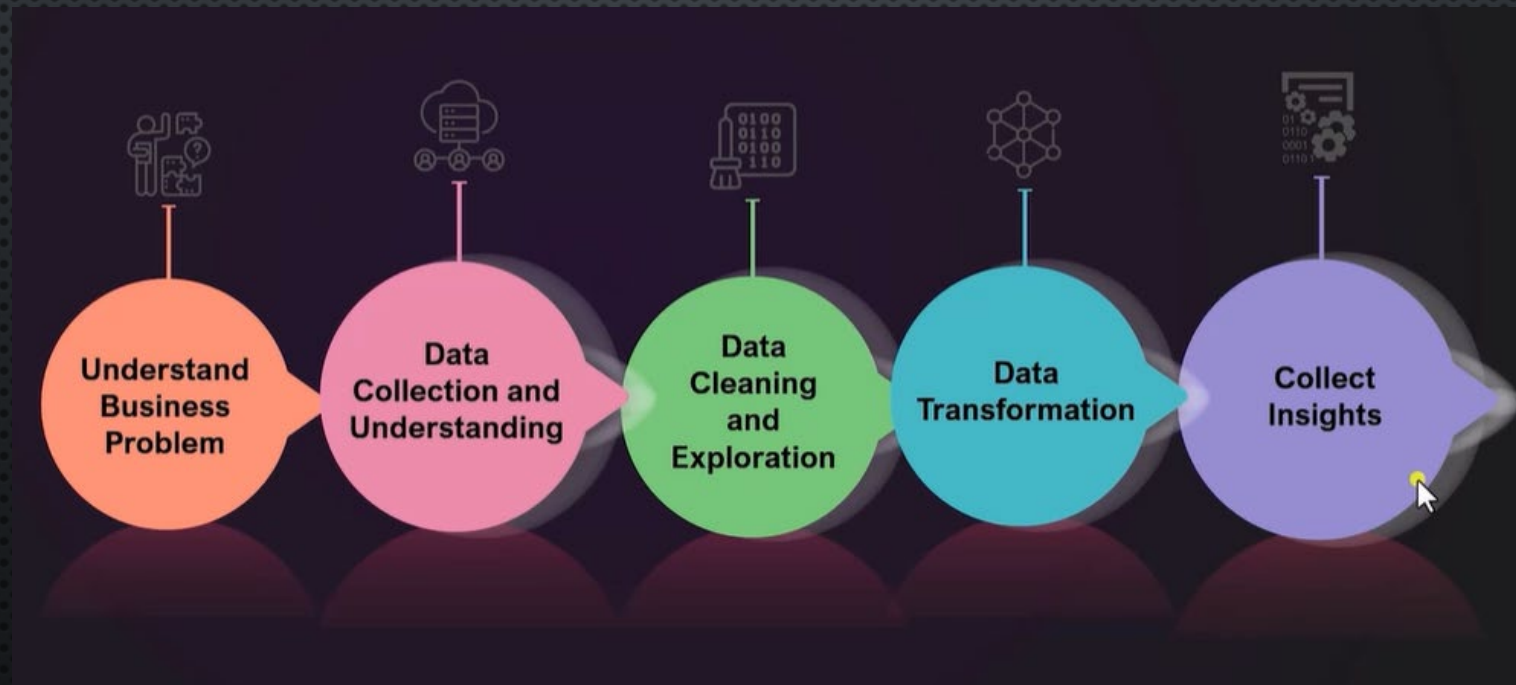
AtliQ Palace

Problem Statement

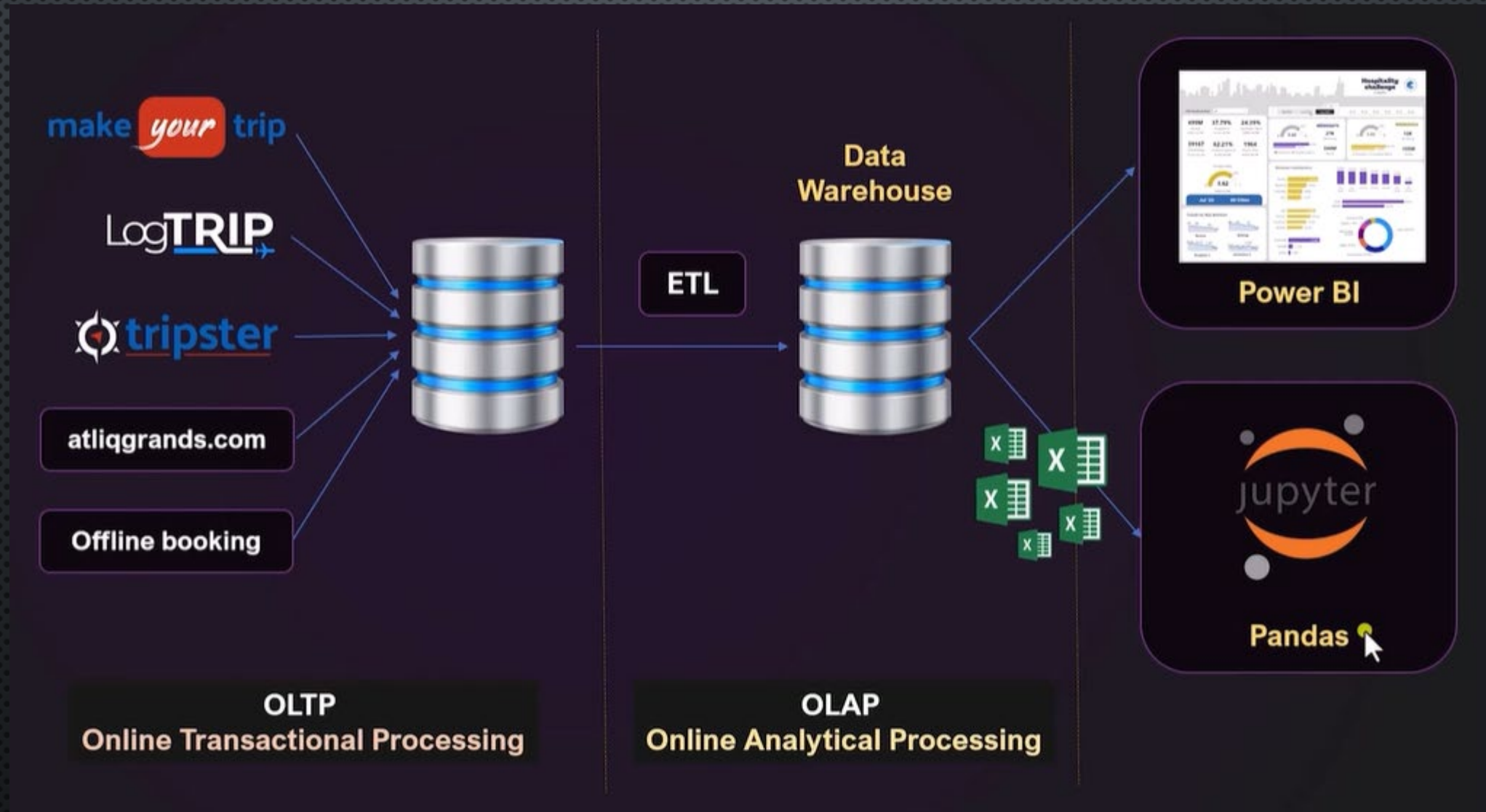
- ❑ AtliQ Grands is a company with 20 years of experience in Hotel Industry. It was losing its market share and revenue due to strategic moves from other competitors and ineffective decision-making in management.
- ❑ The company wants to incorporate Business Intelligence and Data Analytics to regain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

Underperforming Room

Class: **Standard**

High Performing Room

Class: **Elite**

```
: 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:

As per May 2022-July 2022 data.

- Conduct a competitive analysis to adjust pricing for Standard rooms.
- Bundle Standard rooms with additional amenities or discounts to boost occupancy.
- Offer targeted marketing for Standard rooms, highlighting value-for-money benefits.

Insights:

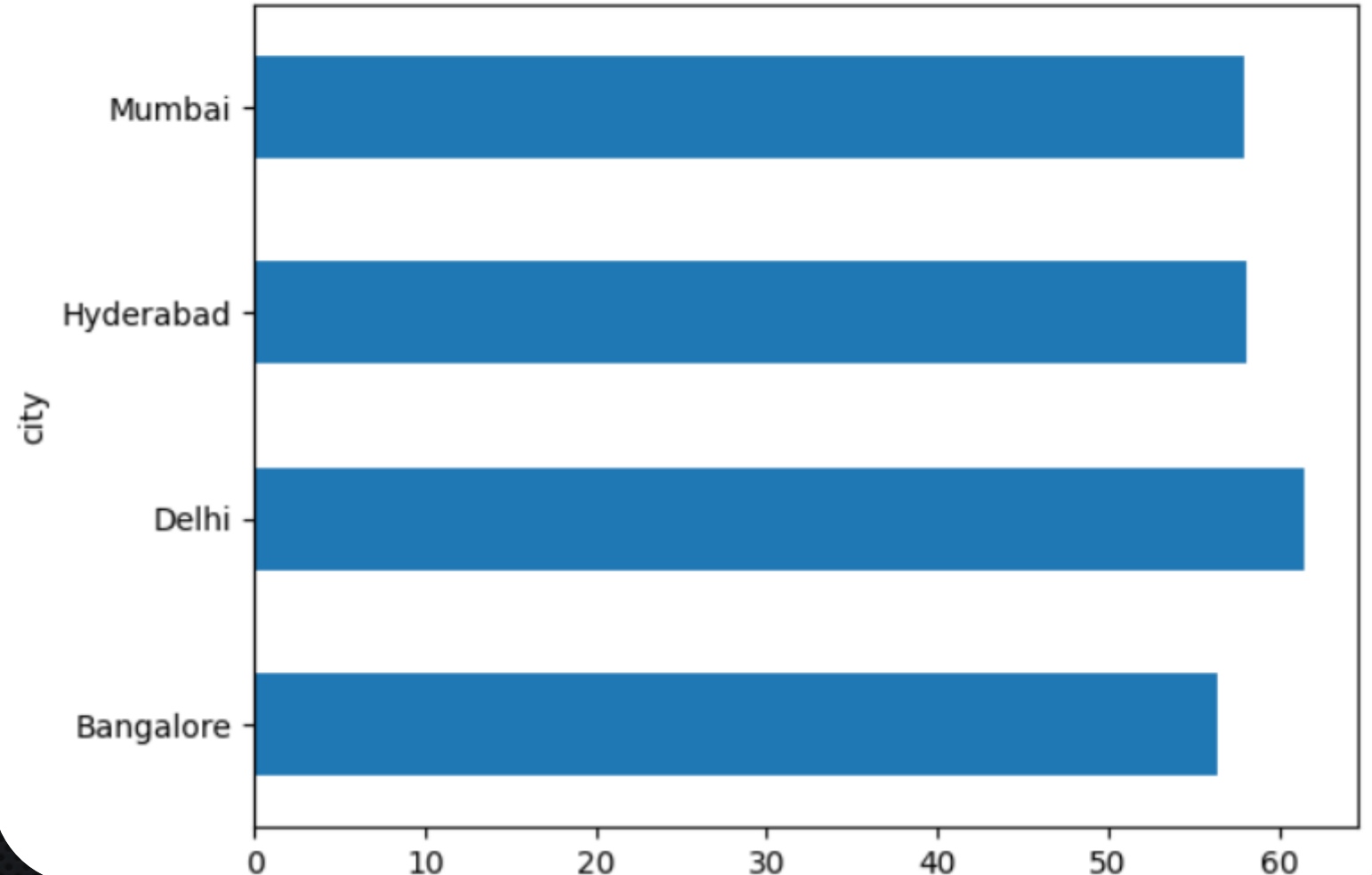
What is the Average
Occupancy rate per City ?

Underperforming City:
Bangalore

High Performing City:
Delhi

```
df.groupby("city")["occ_pct"].mean().plot(kind = "barh")
```

<Axes: ylabel='city'>



Recommendations:

- As per May 2022-July 2022 data.

- Conduct a market analysis to understand demand patterns and pricing elasticity in Bangalore.

- Implement dynamic pricing to attract more bookings during low-occupancy periods.

- Introduce localized marketing campaigns (e.g., weekend getaways or staycations) to stimulate demand.

Insights:

When was the Occupancy better?

Highest Occupancy:
Weekday

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

```
day_type
weekday    50.88
weekend    72.34
Name: occ_pct, dtype: float64
```


Recommendations:

- As per May 2022-July 2022 data.

- Implement weekday-specific promotions to increase weekday bookings (e.g., business travel packages or work-from-hotel offers).
- Collaborate with nearby businesses or corporate offices for corporate tie-ups and long-stay offers.
- Focus on promoting weekend packages to maintain strong weekend occupancy.

Insights:

What is the average occupancy for different cities in the month of June?

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

```
city
Delhi      62.47
Hyderabad  58.46
Mumbai     58.38
Bangalore  56.44
Name: occ_pct, dtype: float64
```

Highest Occupancy: **Delhi**

Lowest Occupancy: **Bangalore**

Recommendations:

- As per May 2022-July 2022 data.

- ➔ Analyze historical data to identify any recurring patterns or seasonality impacting Bangalore.
- ➔ Develop targeted marketing for the upcoming months to address the June dip.
- ➔ Offer limited-time promotions or special packages to boost occupancy.

Insights:

What is the revenue realized per city ?

Highest Revenue: **Mumbai**

Lowest Revenue: **Delhi**

```
df_bookings_all.groupby("city")["revenue_realized"].sum()
```

```
city
Bangalore    420383550
Delhi         294404488
Hyderabad    325179310
Mumbai        668569251
Name: revenue_realized, dtype: int64
```


Recommendations:

- As per May 2022-July 2022 data.

- Maintain premium pricing for targeted segments but introduce lower-priced packages to increase occupancy.

- Explore targeting different customer segments (e.g., budget travelers, business travelers, etc.).

- Analyze average length of stay and adjust marketing for longer stays.

Insights:

What is the month by month revenue?

Highest In: **May**

Lowest In: **June**

```
df_bookings_all.groupby("mmm yy")["revenue_realized"].sum()
```

```
mmm yy
```

```
Jul 22      389940912
```

```
Jun 22      377191229
```

```
May 22       408375641
```

```
Name: revenue_realized, dtype: int64
```


Recommendations:

- As per May 2022-July 2022 data.

- ➔ Analyze potential reasons for the June dip (e.g., holidays, events, weather, etc.).

- ➔ Implement early-bird or last-minute deals in the month of June to boost occupancy and revenue.

- ➔ May often marks the end of the fiscal year for many companies, leading to increased business travel.

- ➔ Create attractive weekday corporate packages to leverage this trend and balance occupancy.

Insights:

Revenue Realized per Hotel Type ?

Highest Revenue:
AtliQ Exotica

Lowest Revenue:
AtliQ Seasons

```
df_bookings_all.groupby("property_name")["revenue_realized"].sum().sort_values()
```

```
property_name
Atliq Seasons      45920757
Atliq Grands      145860641
Atliq Blu          179203544
Atliq Bay          179416721
Atliq City         196555383
Atliq Palace       209474575
Atliq Exotica      219076161
Name: revenue_realized, dtype: int64
```


Recommendations:

- As per May 2022-July 2022 data.

- Assess service quality, facilities, and pricing at AtliQ Seasons to identify improvement areas.

- Introduce promotional campaigns or rebranding initiatives to attract more guests.

- Consider cross-promotional strategies with other AtliQ properties.

Insights:

Average Rating per City ?

Highest Rating:
Delhi

Lowest Rating:
Mumbai

```
df_bookings_all.groupby("city")["ratings_given"].mean().round(2)
```

```
city
Bangalore    3.40
Delhi        3.78
Hyderabad    3.66
Mumbai       3.64
Name: ratings_given, dtype: float64
```


Recommendations:

- As per May 2022-July 2022 data.

- ➔ Conduct a root cause analysis of customer complaints in Bangalore.

- ➔ Implement a guest feedback mechanism to promptly address issues and enhance service quality.

- ➔ Launch a reputation management campaign to improve ratings and attract more bookings.

Insights:

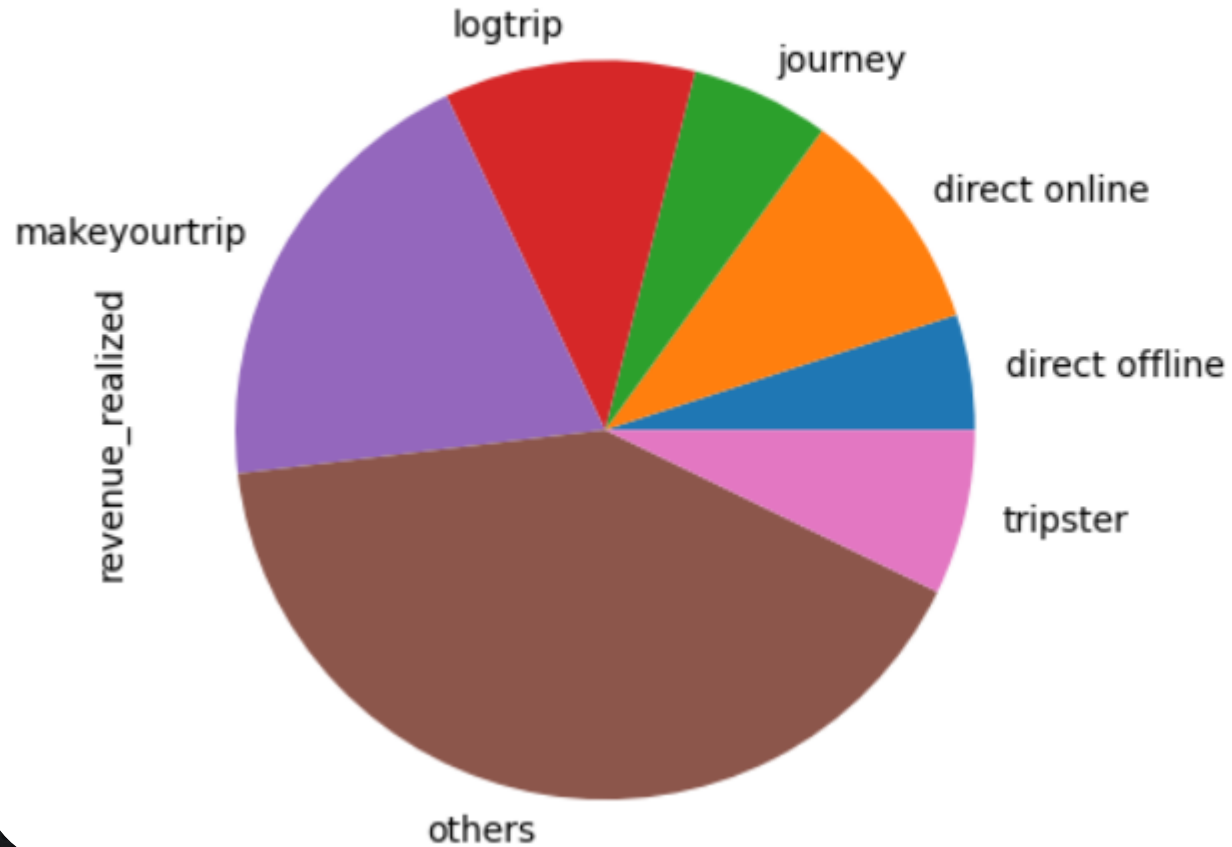
Revenue Realized per
Booking Platform ?

Highest Revenue:
makeyourtrip

Lowest Revenue:
direct offline

```
df_bookings_all.groupby("booking_platform")["revenue_realized"].sum().plot(kind = "pie")
```

<Axes: ylabel='revenue_realized'>



Recommendations:

- As per May 2022-July 2022 data.

- ➔ Optimize listings on major booking platforms (e.g., MakeYourTrip, Tripster) to increase visibility and attract more bookings.
- ➔ Negotiate better commission rates with high-performing platforms.
- ➔ Implement platform-specific promotional offers to boost direct bookings.

Thank you

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



[LinkedIn](#)



[Github](#)

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