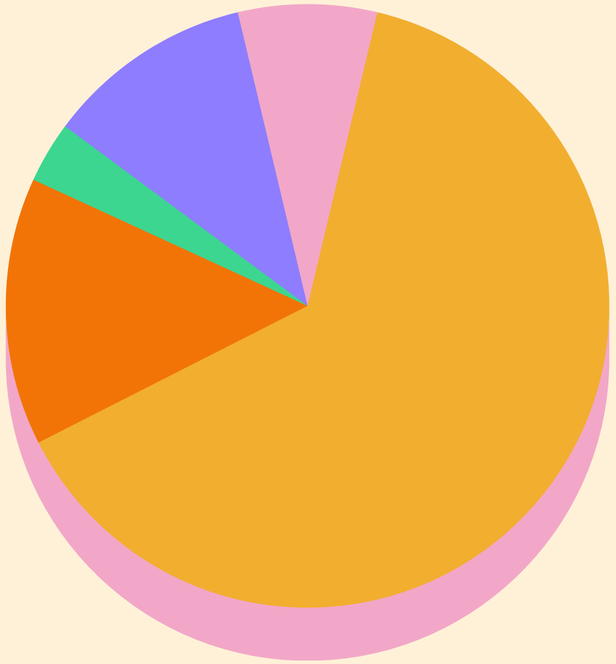
HOSPITALITY DOMAIN ANALYSIS



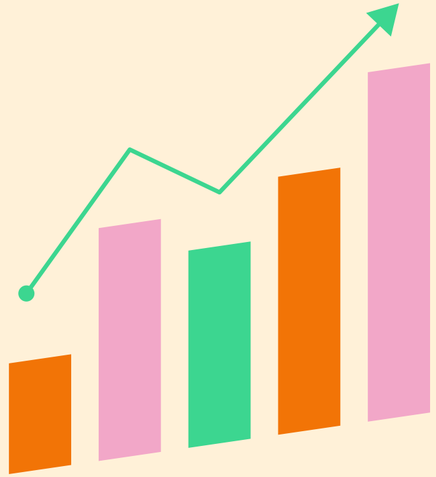
presented by Md Tarif

DESCRIPTION

The project aims to analyze data in the hospitality domain to understand customer behavior, improve service quality, and increase overall customer satisfaction.

STEPS INVOLVED:

1. Understanding the Business Problem
2. Data Collection and Understanding
3. Data Cleaning and Exploration
4. Data Transformation
5. Collect Insights



UNDERSTANDING THE BUSINESS PROBLEM:

The project starts by identifying key business challenges in the hospitality sector, such as low customer satisfaction, high churn rates, or identifying the most profitable customer segments. The goal is to use data-driven insights to address these issues.

DATA COLLECTION AND UNDERSTANDING

Relevant data is collected from different sources such as customer reviews, booking records, feedback forms, and transaction details. This data is then explored to understand its structure, types, and relationships between different features.

	booking_id	property_id	booking_date	check_in_date	checkout_date	no_guests	room_category	booking_platform
0	May012216558RT11	16558	27-04-22	1/5/2022	2/5/2022	-3.0	RT1	direct online
1	May012216558RT12	16558	30-04-22	1/5/2022	2/5/2022	2.0	RT1	others

DATA CLEANING AND EXPLORATION

The data is cleaned by handling missing values, removing duplicates, and correcting inconsistencies. After cleaning, exploratory data analysis (EDA) is conducted to find patterns, trends, and correlations.

std	1093.055847	1.034885	1.235009	9.303604e+04	6928.108124
min	16558.000000	-17.000000	1.000000	6.500000e+03	2600.000000
25%	17558.000000	1.000000	3.000000	9.900000e+03	7600.000000

DATA TRANSFORMATION

The cleaned data is transformed into a format suitable for analysis. This step includes feature engineering, normalization, and creating new variables that can help in generating better insights.

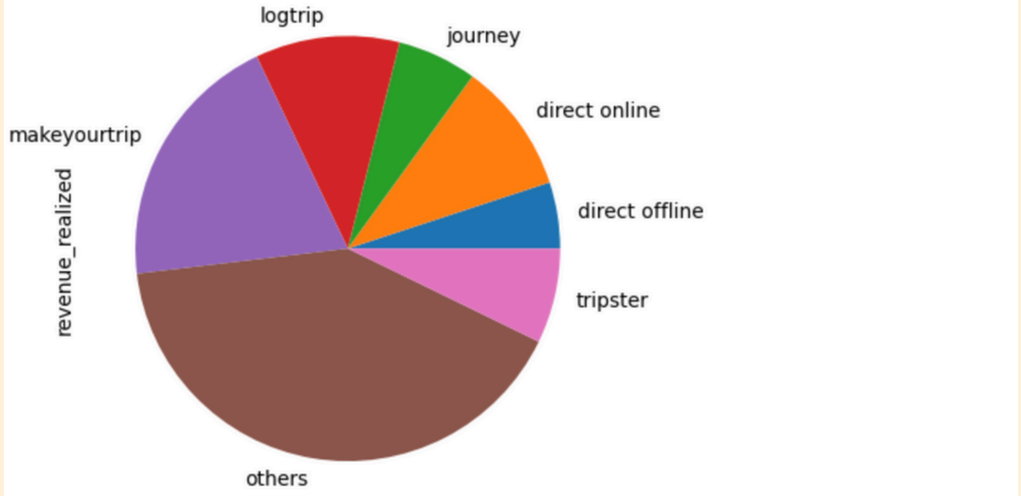
```
 #   Column     Non-Null Count  Dtype
---  ------     --------------  -----
 0   date       92 non-null     datetime64[ns]
 1   mmm yy     92 non-null     object
```

COLLECT INSIGHTS

Based on the analysis, actionable insights are generated. For example, identifying factors that lead to positive customer experiences, understanding peak booking periods, or finding out which services are most valued by customers.

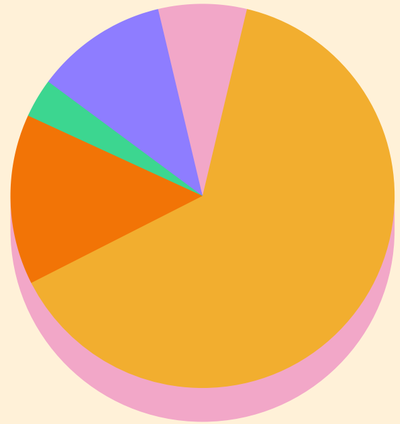
```
df_bookings_all.groupby("booking_platform")["revenue_realized"].sum().plot(kind="pie")
```

```
<Axes: ylabel='revenue_realized'>
```



TOOLS USED

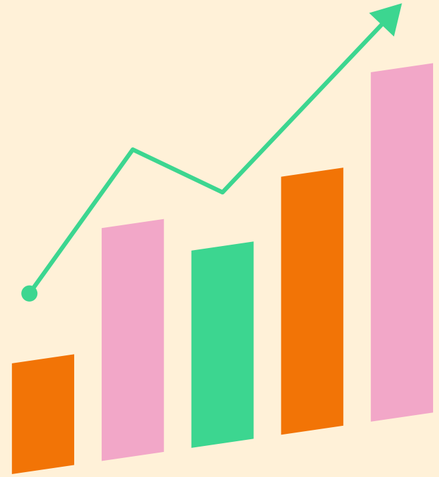
- Python
- Pandas
- Matplotlib
- Seaborn



PROBLEMS WE HAVE TO SOLVE:

DATA IMPORT AND DATA EXPLORATION

- Find out total bookings per property_id
- Explore bookings data
- Make a bar chart
- Find out properties that have highest capacity



DATA CLEANING

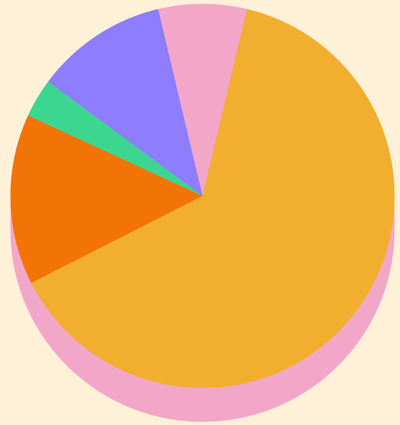
- Outlier removal in revenue generated
- In aggregate bookings find out records that have successful_bookings value greater than capacity. Filter those records

DATA TRANSFORMATION

- Create occupancy percentage column
- Convert it to a percentage value

INSIGHTS GENERATION

- We got new data for the month of august. Append that to existing data
- Print month by month revenue
- Print a pie chart of revenue realized per booking platform
- When was the occupancy better? Weekday or Weekend?



OUTCOME

The project provides valuable insights that can help businesses in the hospitality sector make informed decisions, improve their services, and enhance customer satisfaction.

THANK YOU!

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