Swiggy Business Model

Aggregator platform - Connects users, restaurants, and delivery partners via an app.

Diverse Revenue - Earns from commissions, delivery fees, ads, subscriptions, and Instamart.

Strong Logistics – Own delivery fleet ensures faster and reliable service.

Types of Data Analysis

- **Customer Behaviour and Insights**

- **Order and Sales Analysis**

- **Restaurant Performance**

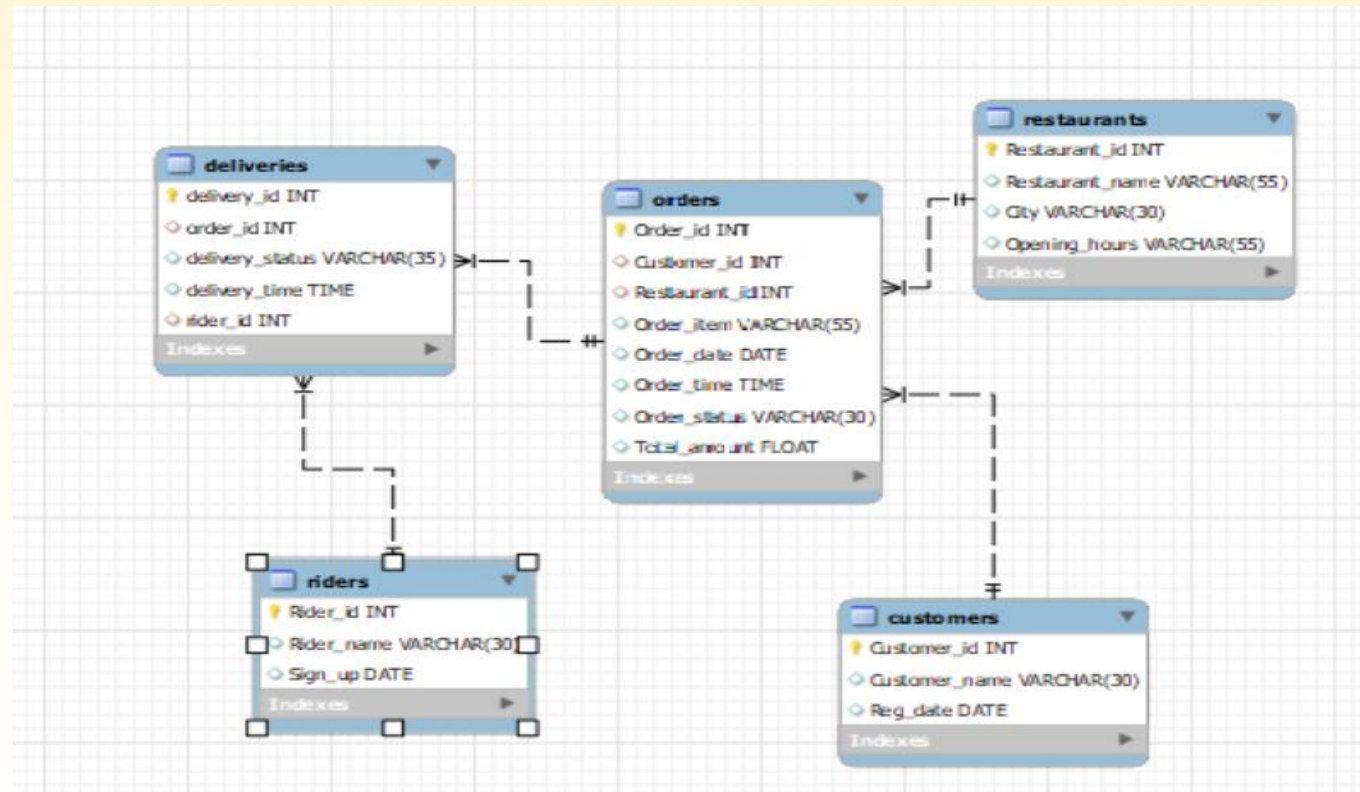- **Rider Efficiency and Performance**

- **Operational Effectiveness**

Database Setup – Snowflake Schema

Tools used

- **SQL** – Data modeling, Data exploration, Data Analysis

- **PowerBI** – Data visualization
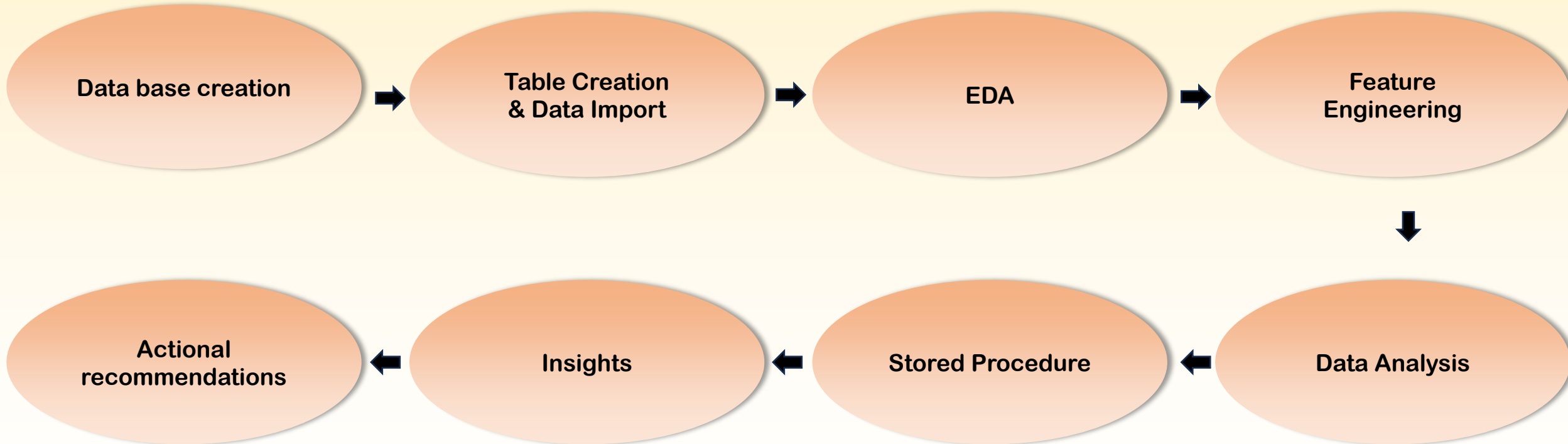
- **Presentation** – Power Point

Work Flow

Data base creation ➡ Table Creation & Data Import ➡ EDA ➡ Feature Engineering

⬇

Actional recommendations ⬅ Insights ⬅ Stored Procedure ⬅ Data Analysis

Let's Get into the
Business problems

1. Popular Time Slots:

Identify the time slots during which the most orders are placed, based on 2-hour intervals.

Time_slot	Total_order
02:00:00 PM-04:00:00 PM	1188
06:00:00 PM-08:00:00 PM	1136
10:00:00 PM-00:00:00 AM	1123
12:00:00 PM-02:00:00 PM	1115
10:00:00 AM-12:00:00 PM	1107
08:00:00 PM-10:00:00 PM	1089
04:00:00 PM-06:00:00 PM	1080
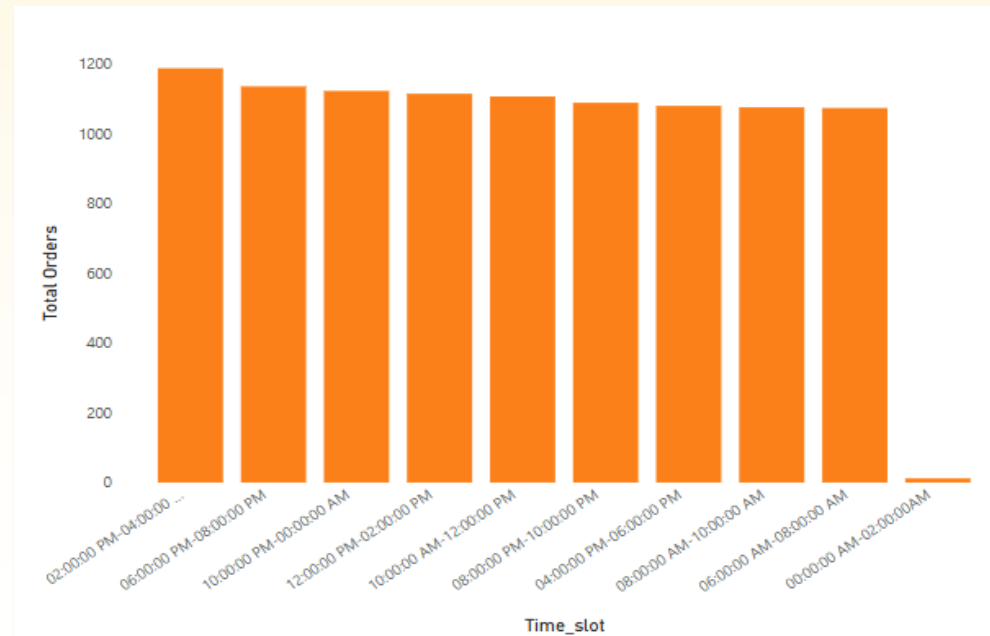
The Most popular time slots are from 2pm to 4pm

2. High-Value Customers:

List the customers who have spent more than 100K in total on food orders.

customer_name	customer_id	Total_order_amt
Sneha Desai	6	269197
Rahul Verma	7	262094
Aman Gupta	5	257322
Karan Kapoor	9	244287
Neha Joshi	8	243223
Ritu Patel	4	242681
Nikhil Jain	15	168782
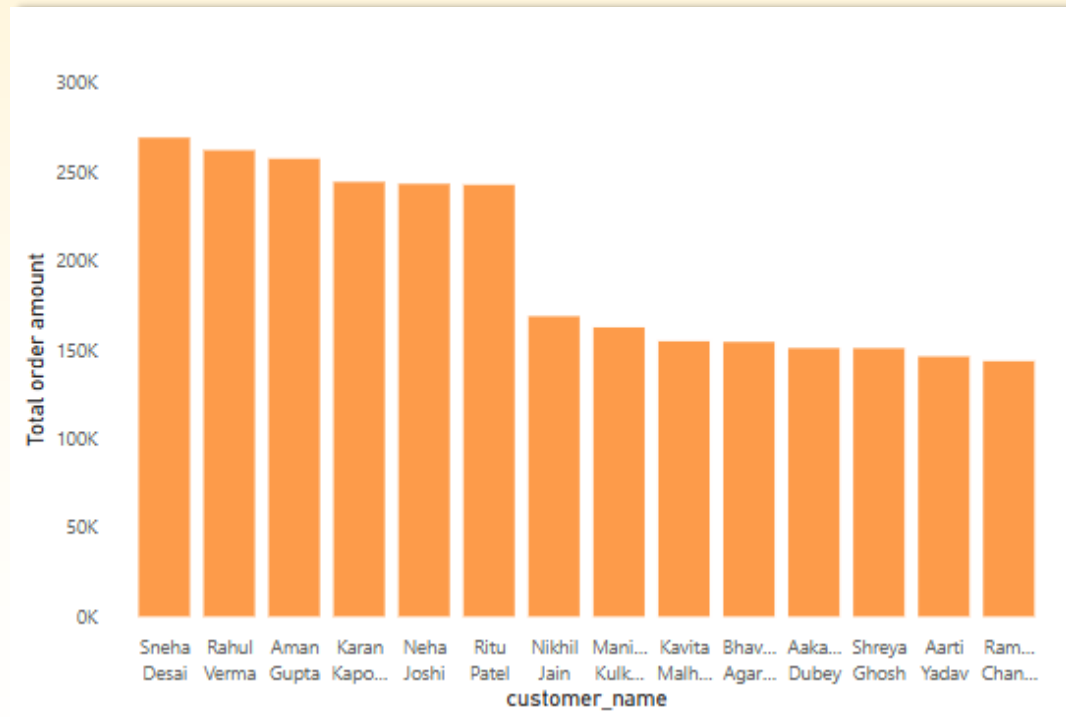
Customer id 6,7,5,9,8,4 are the high value customers who spent above 2.4L order amount

3. Restaurant Revenue Ranking

Rank restaurants by their total revenue from the last 2 year within their city.

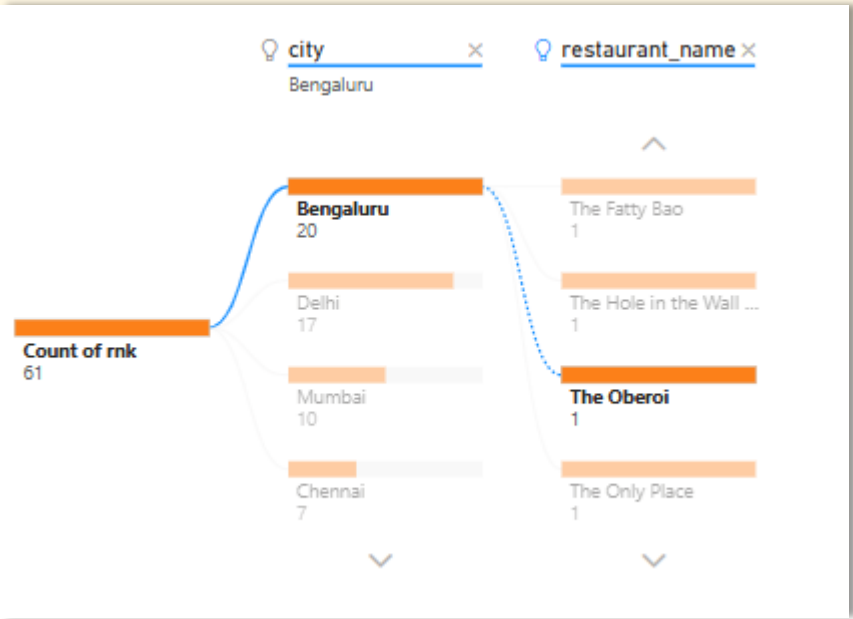| Restaurant_id	Restaurant_name	city	revenue	rnk
39	The Oberoi	Bengaluru	57046	1
36	The 13th Floor	Bengaluru	45585	2
37	The Fatty Bao	Bengaluru	45234	3
43	Nagarjuna	Bengaluru	44980	4
47	Toit Brewery	Bengaluru	44161	5
38	Windmills Craftworks	Bengaluru	43864	6
35	Corner House	Bengaluru	42908	7

Restaurant id 39 in Bangalore, 17 in delhi,3 in Mumbai, 60 in Chennai, 51 in Hyderabad are the top ranked restaurants by revenue

city — Bengaluru
restaurant_name

Count of rnk
61

Bengaluru
20

Delhi
17

Mumbai
10

Chennai
7

The Fatty Bao
1

The Hole in the Wall ...
1

The Oberoi
1

The Only Place
1

4. Most Popular Dish by City

Identify the most popular dish in each city based on the number of orders.

city	order_item	No_of_orders
Bengaluru	Chicken Biryani	172
Chennai	Mutton Rogan Josh	74
Delhi	Paneer Butter Masala	97
Hyderabad	Chicken Biryani	81
Mumbai	Paneer Butter Masala	363

Popular dishes by city

Mumbai — Paneer Butter Masala 363

Bengaluru — Chicken Biryani 172

Delhi — Paneer Butter Ma...

Hyderabad — Chicken Birya...

Chennai — Mutton Rog...
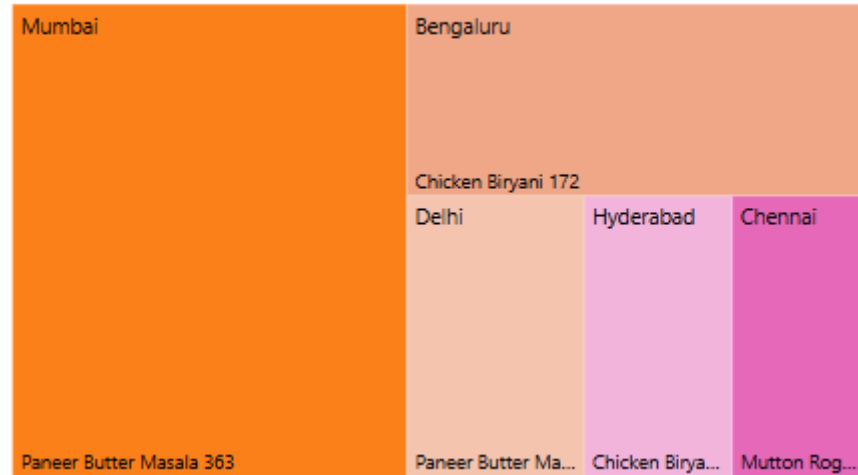
Though each city has its own popular dish, but the love for paneer butter masala and chicken biryani is most.

5. Cancellation Rate Comparison

Calculate the cancellation rate for each restaurant between the 2023-- and 2024.

Restaurant_id	restaurant_name	cancellation_rate
21	Perch Wine & Coffee Bar	6.56 %
13	Bukhara	5.48 %
43	Nagarjuna	5.47 %
33	Truffles	5.36 %
27	Punjabi By Nature	5.19 %
40	Ebony	4.63 %
52	The Spicy Venue	4.55 %
26	Sagar Ratna	4.48 %
55	Murugan Idli Shop	4.44 %
25	Imly	4.23 %
41	Meghana Foods	4.03 %
24	Olive Bar & Kitchen	3.90 %
38	Windmills Craftworks	3.68 %

cancellation_rate by restaurant
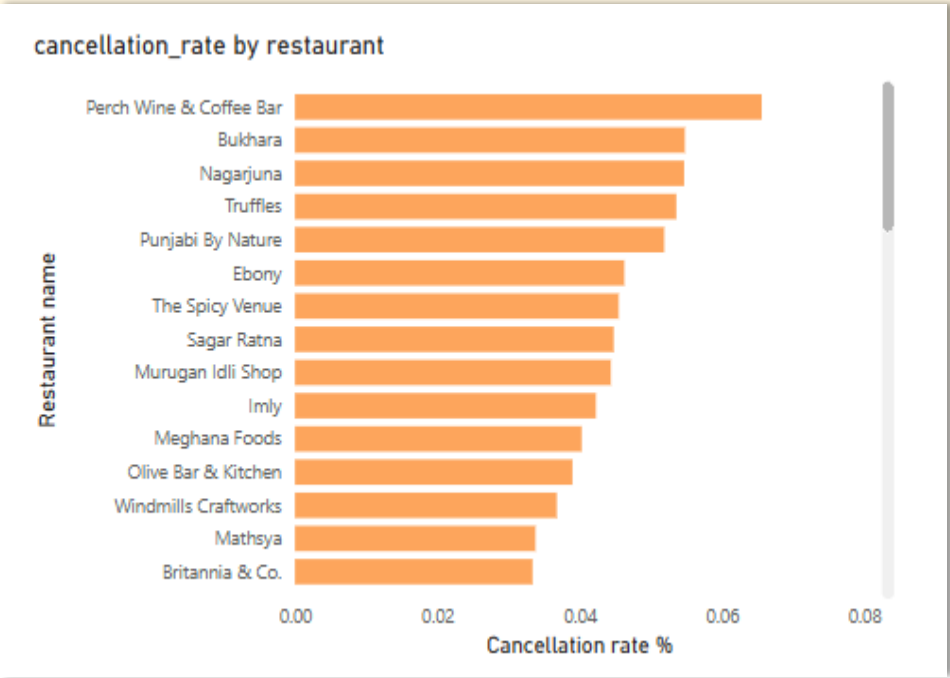
Restaurant id 21 has the highest cancellation rate % followed by 13,43,33 and 27

6. Customer Segmentation

Segment customers into 'Gold' or 'Silver' groups based on their total spending -- compared to the average order value (AOV). If a customer's total spending exceeds the AOV, -- label them as 'Gold'; otherwise, label them as 'Silver'.

customer_segmentation	Total_revenue	Total_orders
Gold	3227916	9999
Silver	300	1
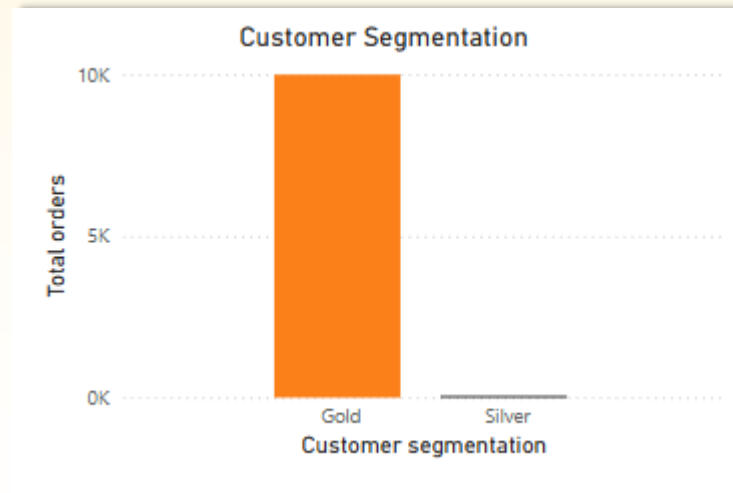
We have only one customer who is in the silver category

Customer Segmentation

7. Order frequency by day

Analyze order frequency per day of the week and identify the peak day for each restaurant.

restaurant_id	restaurant_name	day_of_week	total_orders
3	Bademiya	Wednesday	81
4	Ziya	Sunday	78
5	Gajalee	Thursday	77
6	Masala Library	Monday	73
7	Mahesh Lunch Home	Friday	70
8	Yauatcha	Thursday	76
9	Britannia & Co.	Saturday	85
10	Indigo	Sunday	75
11	Indian Accent	Sunday	11
11	Indian Accent	Thursday	11
12	Karimâ€™s	Friday	17
13	Bukhara	Monday	13
14	Moti Mahal	Saturday	13
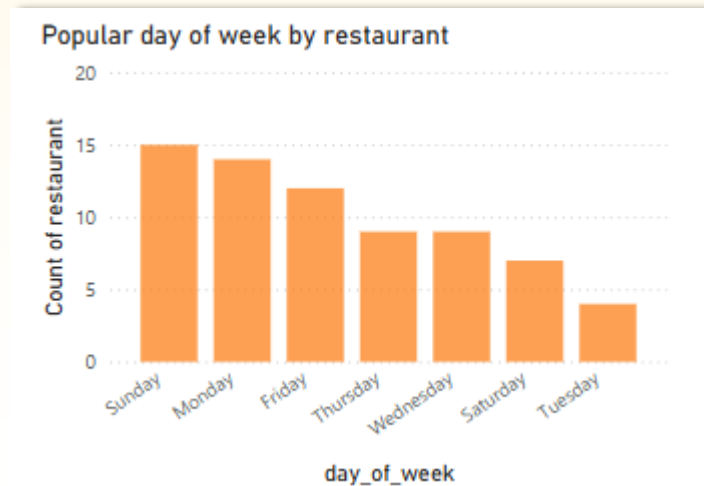
Sunday has the highest order frequency, followed by Monday.

Popular day of week by restaurant

8. Order Item Popularity

Track the popularity of specific order items by seasonal demand spikes.

order_item	Total_orders	Seasons
Burger	110	Autumn
Burger	110	Winter
Butter Chicken	87	Spring
Chicken Biryani	189	Spring
Chicken Shawarma	117	Spring
Chicken Tikka	34	Spring
Chole Bhature	108	Summer
Dal Makhani	119	Spring
Egg Curry	113	Autumn
Fish Curry	88	Spring
Grilled Chicken Sa...	82	Autumn
Hyderabadi Biryani	111	Autumn
Hyderabadi Biryani	111	Spring

Popular dishes by season
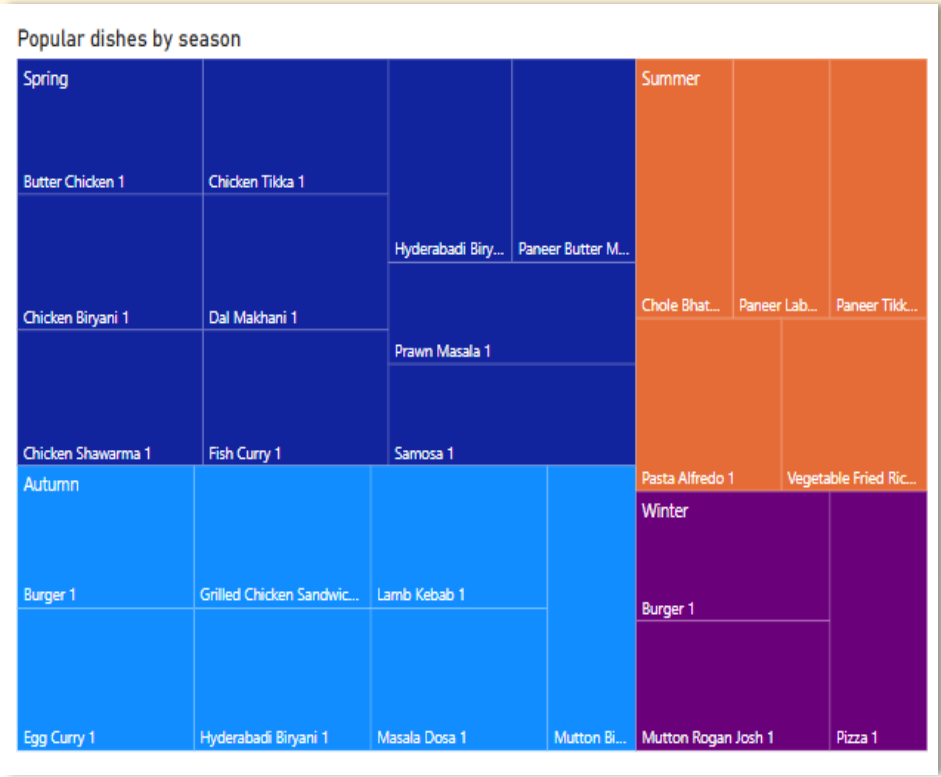
Spring is the most popular season with higher no of dishes are most selling

9. Ranking City by Revenue

Rank each city based on the total revenue for the last year (2023).

city	Total_revenue	rnk
Mumbai	1522121	1
Bengaluru	719642	2
Delhi	395417	3
Hyderabad	306639	4
Chennai	284397	5

Total_revenue by city

0M (8.81%)

2M (47.15%)

0M (9.5%)

0M (12.25%)

1M (22.29%)

city
- Mumbai
- Bengaluru
- Delhi
- Hyderabad
- Chennai
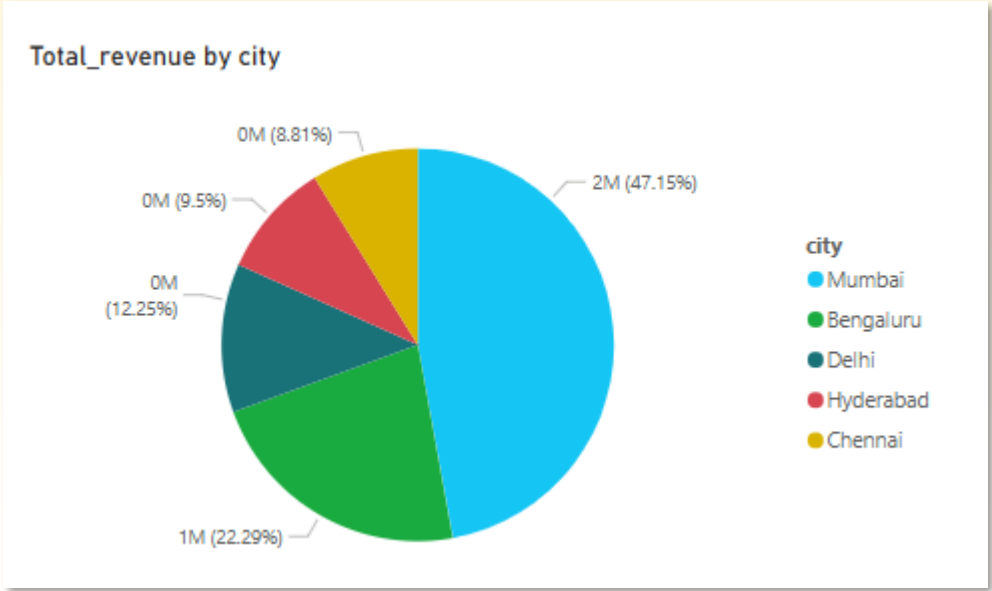
Mumbai is the top ranked city by Revenue, followed by Bengaluru.

10. Stored Procedure

create a stored procedure to show the full order history of a customer sorted by most recent-- return customer name, order id, restaurant name, order date, Total amount

```
delimiter //

create procedure customer_details( in customer_id int)

begin

    select customer_name,order_id,restaurant_name,order_date,total_amount

    from customers c left join orders o

    on c.Customer_id=o.Customer_id

    left join restaurants r

    on r.Restaurant_id=o.Restaurant_id

    where c.Customer_id=customer_id

    order by order_date desc;

end //
```

```
delimiter ;

call customer_details(1);
```

OUTPUT:

customer_name	order_id	restaurant_name	order_date	total_amount
Arjun Mehta	18	Ziya	2024-01-18	475
Arjun Mehta	8	Gajalee	2024-01-08	323
Arjun Mehta	5	Corner House	2024-01-05	293
Arjun Mehta	2940	Masala Library	2023-12-30	203
Arjun Mehta	3723	Almond House	2023-12-29	240
Arjun Mehta	430	Toit Brewery	2023-12-24	250
Arjun Mehta	3228	Lodi - The Garden Restaurant	2023-12-24	259
Arjun Mehta	1032	Ziya	2023-12-20	271
Arjun Mehta	439	Ziya	2023-12-19	321
Arjun Mehta	3053	The 13th Floor	2023-12-19	243
Arjun Mehta	2143	Shah Ghouse	2023-12-16	328
Arjun Mehta	1282	Leopold Cafe	2023-12-09	202
Arjun Mehta	138	Mahesh Lunch Home	2023-12-08	297
Arjun Mehta	2345	Annalakshmi	2023-12-06	516
Arjun Mehta	3239	Lazy Suzy	2023-12-06	365
Arjun Mehta	1417	Windmills Craftworks	2023-12-02	310

Query Optimization

- **Indexed customer_name, order_date, order_status, delivery_status columns**

- **Avoided SELECT *, given proper columns in select statement**

- **Used CTE's and JOINS over subqueries**

- **Used JOINS wisely**

✓	5	21:20:55	select restaurant_name,city , sum(case when delivery_status="not delivered" then 1 ...	60 row(s) returned	0.016 sec / 0.000 sec
✓	6	21:21:09	create index idx_orderstatus on orders(order_status)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.141 sec
✓	7	21:21:09	create index idx_deliverystatus on deliveries(delivery_status)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.078 sec
✓	8	21:21:19	select restaurant_name,city , sum(case when delivery_status="not delivered" then 1 ...	60 row(s) returned	0.000 sec / 0.000 sec

Top Key Insights

- **Peak Ordering Time**: Most orders are placed between **2 PM– 4 PM**, while **12 AM – 2 AM** sees minimal activity.

- **Top Customers**: Customer id **6,7,5** placed over **750 orders** each with an average order value of **₹300–₹350**.

- **High Non-Deliveries**: Restaurant id **5,7,3** show the **highest non-delivery rates**.

- **Seasonal Trends**: **Spring** has the **highest dish sales**, while **winter** has the lowest, indicating seasonal food demand.

- **Underperforming Riders**: Rider id **1,2,3,4** consistently show **longer delivery times** and receive **3-star ratings**.

- **Top-Selling Items by City**: Dishes like **Chicken Biryani, Mutton Rogan Josh**, and **Paneer Butter Masala** are best-sellers across major cities.

Actionable Recommendations

- **Introduce Late-Night Offers**: Encourage more orders during **12 AM – 2 AM** with special discounts or combos.

- **Reward Loyal Customers**: Launch a **VIP program** or exclusive deals for high-frequency users to boost retention.

- **Improve Restaurant Reliability**: Audit and support restaurants with **high non-delivery rates** to reduce cancellations.

- **Optimize Delivery Staff**: Provide **training or reassignment** for low-rated riders to enhance customer satisfaction.

- **Plan Seasonal Campaigns**: Launch **season-specific menus** or offers during **spring**, and create **winter discounts** to balance demand.

- **Promote Best-Selling Dishes**: Use regional best-sellers in **targeted ads** and **bundled offers** to drive repeat sales.

Thank you