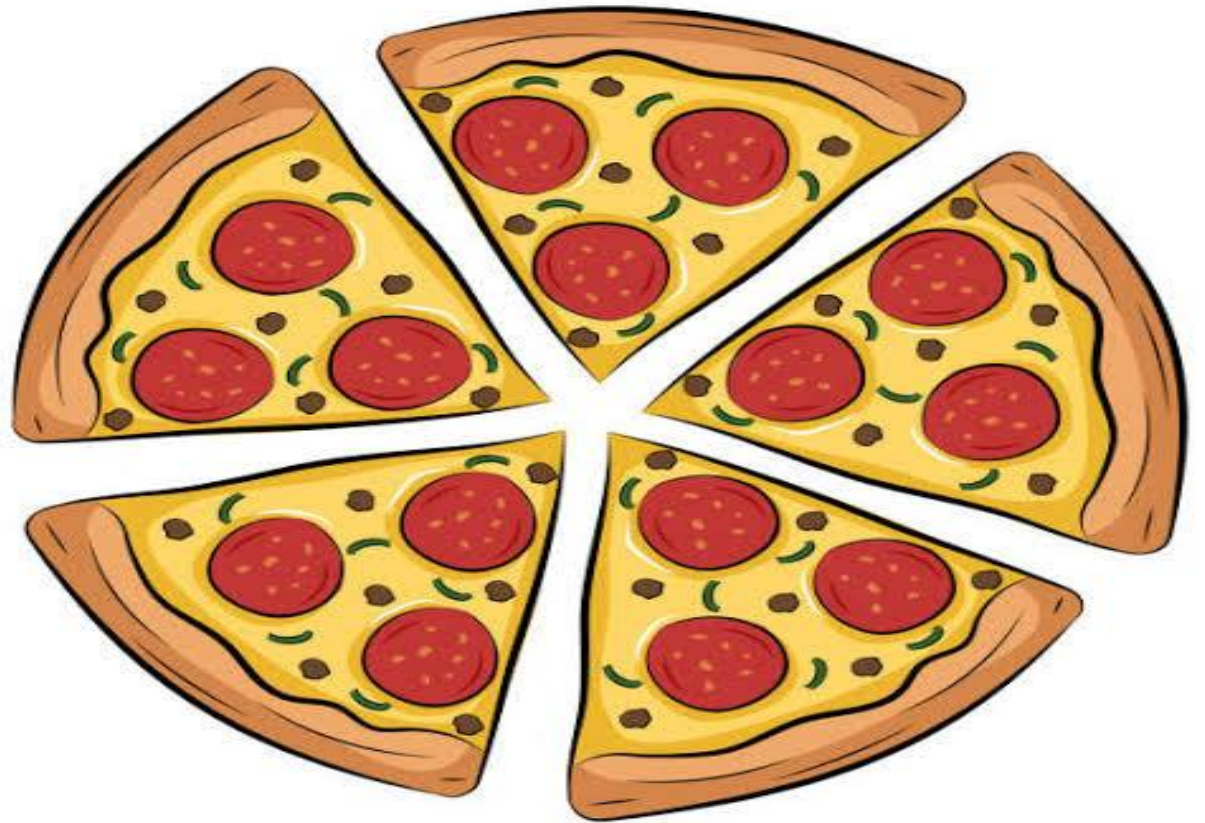


# **PIZZA SALES ANALYSIS**

In this project, I have used SQL queries to answer a wide range of questions related to pizza sales, ranging from basic to advanced analyses.



# ❖ Project Overview

This project seeks to uncover valuable insights into pizza sales trends and customer preferences through SQL analysis. By examining sales data, we aim to identify the most popular pizzas, peak sales times, weekly sales trends, and customer behaviors. These insights will help optimize business strategies and enhance sales performance.

# ❖ Key SQL Techniques Used

- Subqueries: Used to perform operations such as filtering, aggregating, and calculating values within a main query.
- Joins: it combined data from multiple tables to provide a comprehensive data view.
- Aggregations: Summarize the data by using the function, like- SUM(), COUNT(), AVG().
- Window Function: Used to performs calculations across a set of table rows that are related to the current row within the query result, like- Rank().

- Total number of orders placed.

```
SELECT  
    COUNT(*) AS total_order  
FROM  
    orders;
```

	total_order
▶	21350

- Total revenue generated from pizza sales.

---

SELECT

ROUND(SUM(o.quantity \* p.price), 2) AS total\_revenue

FROM

order\_details o

JOIN

pizzas p ON o.pizza\_id = p.pizza\_id;

	total_revenue
▶	817860.05

➤ Top 3 highest-priced pizza.

```
SELECT
    pt.name, p.size, p.price
FROM
    pizza_types pt
    JOIN
        pizzas p ON pt.pizza_type_id = p.pizza_type_id
ORDER BY price DESC
LIMIT 3;
```

	name	size	price
▶	The Greek Pizza	XXL	35.95
	The Greek Pizza	XL	25.5
	The Brie Carre Pizza	S	23.65

- Most & least pizza size ordered.

```
SELECT
    p.size, SUM(quantity) AS total_quantity
FROM
    pizzas p
    JOIN
    order_details o ON p.pizza_id = o.pizza_id
GROUP BY size
ORDER BY 2 DESC;
```

	size	total_quantity
▶	L	18956
	M	15635
	S	14403
	XL	552
	XXL	28

- Top 5 most ordered pizza types along with their quantities.

```
SELECT
    pt.name, SUM(o.quantity) AS total_quantity
FROM
    pizza_types pt
    JOIN
    pizzas p ON pt.pizza_type_id = p.pizza_type_id
    JOIN
    order_details o ON p.pizza_id = o.pizza_id
GROUP BY name
ORDER BY 2 DESC
LIMIT 5;
```

	name	total_quantity
▶	The Classic Deluxe Pizza	2453
	The Barbecue Chicken Pizza	2432
	The Hawaiian Pizza	2422
	The Pepperoni Pizza	2418
	The Thai Chicken Pizza	2371



- Category-wise distribution of pizzas.

```
SELECT  
    category, COUNT(*)  
FROM  
    pizza_types  
GROUP BY category;
```

	category	COUNT(*)
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

- Total quantity of each pizza category ordered.

```
SELECT
```

```
    pt.category, SUM(quantity) AS total_quantity
```

```
FROM
```

```
    pizza_types pt
```

```
    JOIN
```

```
    pizzas p ON pt.pizza_type_id = p.pizza_type_id
```

```
    JOIN
```

```
    order_details o ON p.pizza_id = o.pizza_id
```

```
GROUP BY 1;
```

	category	total_quantity
▶	Classic	14888
	Veggie	11649
	Supreme	11987
	Chicken	11050

➤ Distribution of pizza orders by hour of the day.

```
SELECT
```

```
    EXTRACT(HOUR FROM order_time) AS hour, COUNT(*) order_count
```

```
FROM
```

```
    orders
```

```
GROUP BY hour
```

```
ORDER BY 1;
```

	hour	order_count
▶	9	1
	10	8
	11	1231
	12	2520
	13	2455
	14	1472
	15	1468
	16	1920
	17	2336
	18	2399
	19	2009
	20	1642
	21	1198
	22	663
	23	28

## ➤ weekly sales trends

SELECT

WEEKDAY(order\_date) day\_trends, SUM(quantity)

FROM

orders o

JOIN

order\_details od ON o.order\_id = od.order\_id

GROUP BY day\_trends

ORDER BY 1;

day_trends	SUM(quantity)
0	6485
1	6895
2	6946
3	7478
4	8242
5	7493
6	6035

- Average number of pizzas ordered per day.

SELECT

ROUND(AVG(total), 2) avg\_order\_per\_day

FROM

(SELECT

o.order\_date, SUM(od.quantity) AS total

FROM

orders o

JOIN order\_details od ON o.order\_id = od.order\_id

GROUP BY o.order\_date) AS day\_wise\_order\_summary;

	avg_order_per_day
▶	138.47

- Top 3 most ordered pizza types based on revenue.

```
SELECT
    name, SUM(quantity * price) AS revenue
FROM
    pizza_types pt
    JOIN
    pizzas p ON pt.pizza_type_id = p.pizza_type_id
    JOIN
    order_details od ON p.pizza_id = od.pizza_id
GROUP BY name
ORDER BY 2 DESC
LIMIT 3;
```

	name	revenue
➤	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5

- Percentage contribution of each pizza category to total revenue.

```
SELECT
    pt.category,
    ROUND(SUM(price * quantity) / (SELECT
        SUM(price * quantity)
        FROM order_details o
        JOIN pizzas p USING (pizza_id)) * 100,2)
    AS revenue_percentage
FROM
    pizza_types pt
JOIN pizzas p ON pt.pizza_type_id = p.pizza_type_id
JOIN order_details od ON p.pizza_id = od.pizza_id
GROUP BY pt.category
ORDER BY 2 DESC;
```

	category	revenue_percentage
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

- Top 3 most ordered pizza types based on revenue for each pizza category.

```
SELECT *
FROM (
    SELECT
        pt.category,
        pt.name,
        ROUND(SUM(od.quantity * p.price)) AS revenue,
        DENSE_RANK() OVER
            (PARTITION BY pt.category
             ORDER BY SUM(od.quantity * p.price) DESC) AS rnk
    FROM
        pizza_types pt
        JOIN pizzas p ON pt.pizza_type_id = p.pizza_type_id
        JOIN order_details od ON p.pizza_id = od.pizza_id
    GROUP BY
        pt.category, pt.name
) AS x
WHERE rnk <= 3;
```

category	name	revenue
Chicken	The Thai Chicken Pizza	43434
Chicken	The Barbecue Chicken Pizza	42768
Chicken	The California Chicken Pizza	41410
Classic	The Classic Deluxe Pizza	38180
Classic	The Hawaiian Pizza	32273
Classic	The Pepperoni Pizza	30162
Supreme	The Spicy Italian Pizza	34831
Supreme	The Italian Supreme Pizza	33477
Supreme	The Sicilian Pizza	30940
Veggie	The Four Cheese Pizza	32266
Veggie	The Mexicana Pizza	26781
Veggie	The Five Cheese Pizza	26066



# Key Insights After the Analysis:

- Over the year, around 21,350 orders were placed, generating a total revenue of 817,860.
- There are around 32 types of pizzas; the most expensive pizza is 'The Greek Pizza' and the least expensive is 'The Pepperoni Pizza'.
- There are 4 sizes of pizzas available, with the L-size pizza being the most commonly sold and the XXL-size being the least sold.
- The top most ordered pizzas are 'The Classic Deluxe Pizza', 'The Barbecue Chicken Pizza', 'The Hawaiian Pizza'.
- On a daily basis, an average of 138 pizzas were sold, with the most pizzas being sold during lunch and evening times.
- People mostly preferred non-vegetarian pizza.
- Most pizzas were sold on Friday and Saturday.

**Thank You**