

# PIZZA SALES ANALYSIS SQL PROJECT



# Introduction

Pizza businesses thrive on customer satisfaction, and behind every successful pizzeria is data that tells a story. From which pizza size flies off the shelves to which toppings contribute most to revenue, data insights drive decisions that make or break profits.

In this Retail Sales Analysis project, I use SQL to dive deep into a pizza chain's order data, uncovering key trends and metrics. This analysis reveals the highest revenue-generating pizzas, optimal sale times, and customer preferences that inform business strategy.

## Why This Analysis Matters

Streamline operations by predicting demand. Maximize revenue by focusing on top-performing products. Enhance customer satisfaction by optimizing offerings based on real data.

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```
SELECT  
    COUNT(order_id) AS total_orders  
FROM  
    orders;
```

Result Grid			 Filter Row
	total_orders		
▶	21350		

# CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES

- **SELECT**

```
ROUND(SUM(orders_details.quantity * pizzas.price),  
      2) as total_sales  
FROM  
  orders_details  
  JOIN  
    pizzas ON pizzas.pizza_id = orders_details.pizza_id
```

Result Grid		Filter
total_sales		
▶	817860.05	

# IDENTIFY THE HIGHEST-PRICED PIZZA.

```
SELECT
    pizza_types.name, pizzas.price
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY pizzas.price DESC
LIMIT 1;
```

Result Grid | Filter Rows:

	name	price
▶	The Greek Pizza	35.95

# IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```
SELECT
    pizzas.size,
    COUNT(orders_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    orders_details ON pizzas.pizza_id = orders_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC;
```

Result Grid | Filter Rows:

	size	order_count
▶	L	18526
	M	15385
	S	14137
	XL	544
	XXL	28

LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES.

**SELECT**

**pizza\_types.name, SUM(orders\_details.quantity) AS quantity**

**FROM**

**pizza\_types**

**JOIN**

**pizzas ON pizza\_types.pizza\_type\_id = pizzas.pizza\_type\_id**

**JOIN**

**orders\_details ON orders\_details.pizza\_id = pizzas.pizza\_id**

**GROUP BY pizza\_types.name**

**ORDER BY quantity DESC**

**LIMIT 5;**

	<b>name</b>	<b>quantity</b>
▶	The Classic Deluxe Pizza	2453
	The Barbecue Chicken Pizza	2432
	The Hawaiian Pizza	2422
	The Pepperoni Pizza	2418
	The Thai Chicken Pizza	2371

JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.

**SELECT**

```
    pizza_types.category,  
    SUM(orders_details.quantity) AS quantity  
FROM  
    pizza_types  
        JOIN  
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id  
        JOIN  
    orders_details ON orders_details.pizza_id = pizzas.pizza_id  
GROUP BY pizza_types.category  
ORDER BY quantity DESC;
```

Result Grid | Filter Rows:

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

SELECT

HOUR(order\_time) AS hour, COUNT(order\_id) AS order\_count

FROM

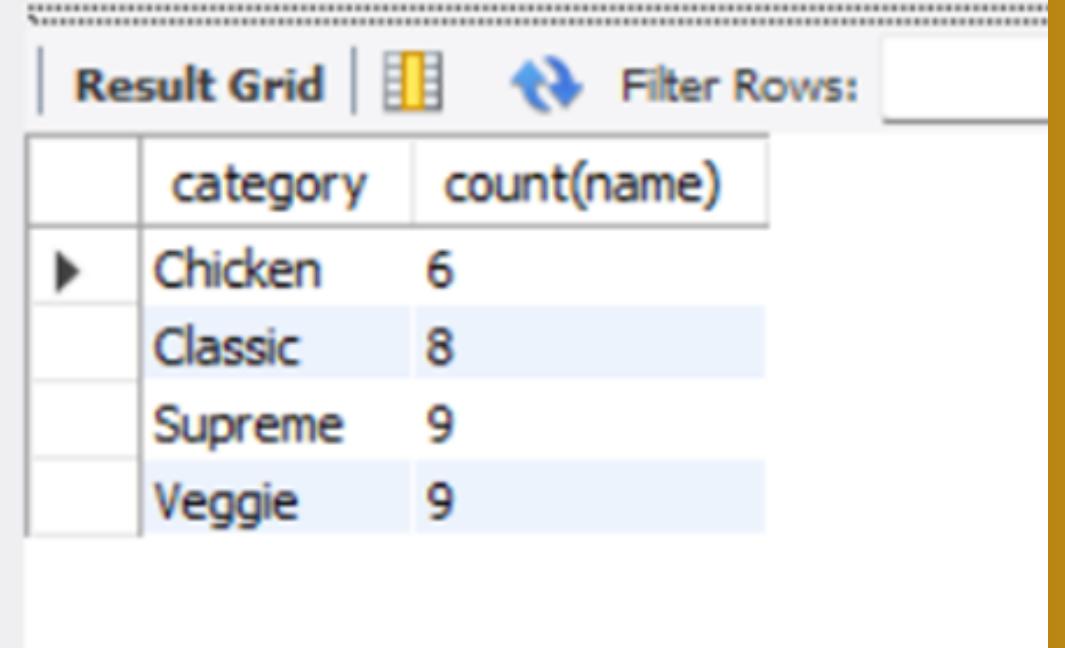
orders

GROUP BY HOUR(order\_time);

	hour	order_count
▶	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
	10	8
	9	1

JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS.

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



	category	count(name)
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY.

```
SELECT
    ROUND(AVG(quantity), 0) as avg_pizzas_ordered_per_day
FROM
    (SELECT
        orders.order_date, SUM(orders_details.quantity) AS quantity
    FROM
        orders
    JOIN orders_details ON orders.order_id = orders_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

Result Grid	
	avg_pizzas_ordered_per_day
▶	138

# DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.

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

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

# CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

```
SELECT
    pizza_types.category,
    ROUND(SUM(orders_details.quantity * pizzas.price) / (SELECT
        ROUND(SUM(orders_details.quantity * pizzas.price),
        2) AS total_sales
    )
FROM
    orders_details
    JOIN
        pizzas ON pizzas.pizza_id = orders_details.pizza_id) * 100,
    2) AS revenue
FROM
    pizza_types
    JOIN
        pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
    JOIN
        orders_details ON orders_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY revenue DESC;
```

	category	revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

# ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```
select order_date,  
sum(revenue) over(order by order_date) as cum_revenue  
from  
(select orders.order_date,  
sum(orders_details.quantity*pizzas.price) as revenue  
from orders_details join pizzas  
on orders_details.pizza_id = pizzas.pizza_id  
join orders  
on orders.order_id = orders_details.order_id  
group by orders.order_date) as sales;
```

	order_date	cum_revenue
▶	2015-01-01	2713.8500000000004
	2015-01-02	5445.75
	2015-01-03	8108.15
	2015-01-04	9863.6
	2015-01-05	11929.55
	2015-01-06	14358.5
	2015-01-07	16560.7
	2015-01-08	19399.05
	2015-01-09	21526.4

# DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY.

```
select name, revenue from
(select category, name, revenue,
rank() over(partition by category order by revenue desc) as rn
from
(select pizza_types.category,pizza_types.name,
sum((orders_details.quantity)*pizzas.price) as revenue
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join orders_details
on orders_details.pizza_id = pizzas.pizza_id
group by pizza_types.category,pizza_types.name) as a) as b
where rn <= 3;
```

	name	revenue
▶	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5
	The Classic Deluxe Pizza	38180.5
	The Hawaiian Pizza	32273.25
	The Pepperoni Pizza	30161.75
	The Spicy Italian Pizza	34831.25
	The Italian Supreme Pizza	33476.75
	The Sicilian Pizza	30940.5
	The Four Cheese Pizza	32265.70000000065
	The Mexicana Pizza	26780.75
	The Five Cheese Pizza	26066.5