

# **PIZZA SALES ANALYSIS USING SQL**

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# BACKGROUND

Hi, I'm Naveen Reddi. I recently completed a pizza sales project where I utilized basic, intermediate, and advanced SQL queries to analyze the data.

# INTRODUCTION

- This project delves into pizza sales data to uncover valuable insights into customer preferences, sales trends, and performance metrics. The primary objective is to optimize business strategies by identifying top-selling items, understanding sales patterns, and providing data-driven recommendations

# DATA RESOURCES

## Table: order\_details

### Columns:

<u>order_details_id</u>	int PK
order_id	int
pizza_id	text
quantity	int

## Table: orders

### Columns:

<u>order_id</u>	int PK
order_date	date
order_time	time

## Table: pizzas

### Columns:

pizza_id	text
pizza_type_id	text
size	text
price	double

## Table: pizza\_types

### Columns:

pizza_type_id	text
name	text
category	text
ingredients	text

## TOOLS USED: MYSQL

# Data Exploration (Basic SQL Queries)

Total number of orders

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

	total_orders
▶	21350

# Total revenue

SELECT

```
    sum(order_details.quantity * pizzas.price) AS Total_Revenue  
FROM  
    order_details  
    JOIN  
    pizzas ON order_details.pizza_id = pizzas.pizza_id
```

	Total_Revenue
▶	817860.0499999993

# 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 price DESC
LIMIT 1
```

name	price
The Greek Pizza	35.95

# Most common pizza size

SELECT

pizzas.size, SUM(order\_details.quantity) AS order\_quantity

FROM

pizzas

JOIN

order\_details ON pizzas.pizza\_id = order\_details.pizza\_id

GROUP BY pizzas.size

ORDER BY order\_quantity DESC

LIMIT 1

size	order_quantity
L	18956

# Top 5 most ordered pizza types

```
SELECT pizza_types.name, SUM(order_details.quantity) AS top5
FROM pizza_types
JOIN pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
JOIN order_details ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY top5 DESC
LIMIT 5
```

name	top5
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

# Deeper Dive (Intermediate SQL Queries)

Total quantity by pizza category

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

Category	top_c
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

## Order distribution by hour

```
SELECT  
    HOUR(order_time), COUNT(order_id)  
FROM  
    orders  
GROUP BY HOUR(order_time)  
ORDER BY COUNT(order_id) DESC
```

hour(order_time)	count(order_id)
12	2520
13	2455
18	2399
17	2336
19	2009
16	1920
20	1642
14	1472
15	1468
11	1231

## Category-wise pizza distribution

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

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

# Average pizzas per day

```
SELECT  
    ROUND(AVG(Daily_orders), 0) AS Daily_avg  
FROM  
    (SELECT  
        orders.order_date AS order_Date,  
        COUNT(order_details.quantity) AS Daily_orders  
    FROM  
        orders  
    JOIN order_details ON orders.order_id = order_details.order_id  
    GROUP BY orders.order_date) AS daily_tble
```

Daily_avg
136

## Top 3 pizzas by revenue

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

# Advanced Insights (Advanced SQL Queries)

## Percentage contribution by pizza type

category	total_revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

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

# Cumulative revenue

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

order_date	cumulative
2015-01-01	2713.850000000004
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
2015-01-10	23990.35000000002

## Top 3 pizzas by revenue per category

```
select category, 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(order_details.quantity*pizzas.price) as revenue
from pizza_types
join pizzas on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details on pizzas.pizza_id = order_details.pizza_id
group by pizza_types.name, pizza_types.category) as r) as b
where rn<=3
```

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