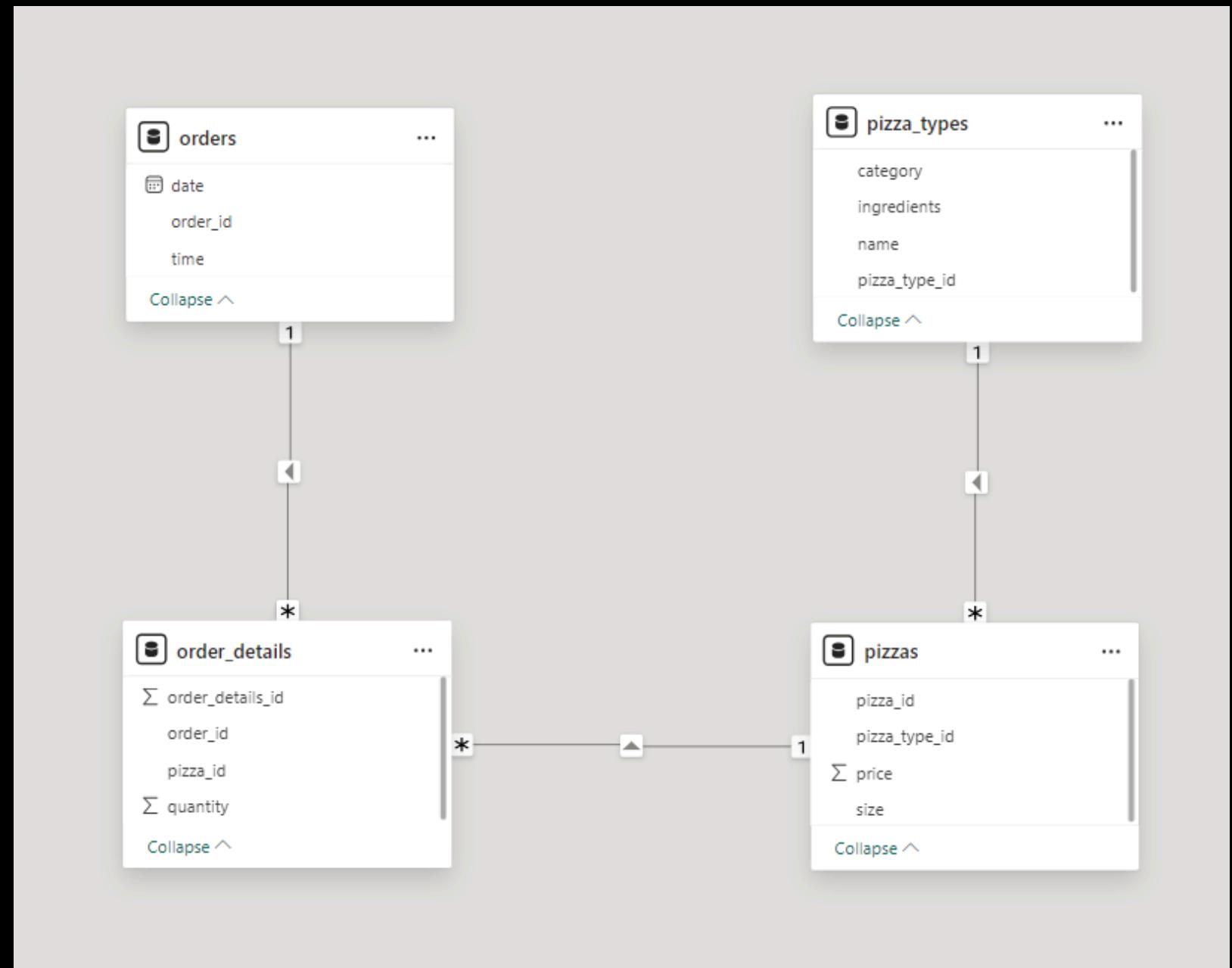


Pizza Sales Analysis Using SQL

A dark, low-light photograph showing a person's hand holding a smartphone. The screen of the phone displays a user interface for a pizza delivery app, showing various menu items and options. The background is mostly black, making the white text on the phone screen stand out.

- Krishna

Using a pizza store dataset, I conducted a comprehensive analysis to uncover key insights into customer ordering patterns and sales performance. By examining total orders and revenue, identifying the highest-priced and most commonly ordered pizzas, and listing the top 5 most popular pizza types, I was able to gain a clear understanding of overall business performance. Additionally, I analyzed the distribution of orders by time and pizza category, and calculated daily averages to identify trends. Revenue analysis highlighted the top-performing pizzas, both overall and within each category, and revealed their contribution to total revenue. This analysis provides actionable insights to inform strategic decisions and optimize the menu offerings.



Data Model

Metadata

orders

date

order_id

time

pizza_types

category

ingredients

name

pizza_type_id

order_details

order_details_id

order_id

pizza_id

quantity

pizzas

pizza_id

pizza_type_id

price

size

Total number of
orders placed.

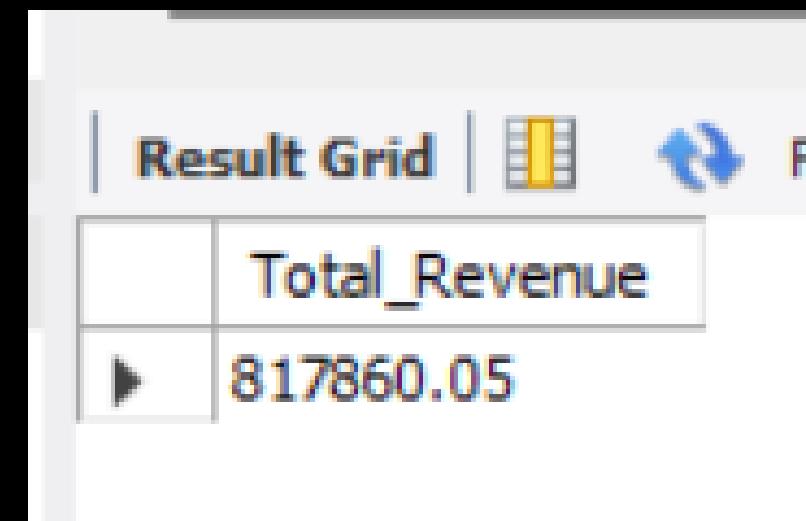
```
-- Total Number of orders  
  
SELECT  
    COUNT(order_id)  
FROM  
    orders;
```

Result Grid	
	count(order_id)
▶	21350

Total revenue generated from pizza sales.

```
-- Total revenue generated

SELECT
    ROUND(SUM(order_details.quantity * pizzas.price),
          2) AS Total_Revenue
FROM
    order_details
        JOIN
    pizzas ON order_details.pizza_id = pizzas.pizza_id
```



The screenshot shows the MySQL Workbench interface with the 'Result Grid' tab selected. The results of the executed SQL query are displayed in a table with one row and two columns. The first column is empty, and the second column is labeled 'Total_Revenue' with the value '817860.05'.

	Total_Revenue
▶	817860.05

Highest-priced pizza.

```
-- 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;
```

	name	price
▶	The Greek Pizza	35.95

The most common pizza size ordered.

```
-- Most common pizza size ordered

SELECT
    pizzas.size,
    COUNT(order_details.order_det_id) AS count_of_order
FROM
    pizzas
        JOIN
            order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY count_of_order DESC;
```

Result Grid		Filter Rows
	size	count_of_order
▶	L	18526
	M	15385
	S	14137
	XL	544
	XXL	28

Top 5 most ordered pizza types along with their quantities.

```
-- Top 5 most ordered pizza types with their quantities

SELECT
    pizza_types.name, SUM(order_details.quantity) AS quantity
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.name
ORDER BY quantity DESC
LIMIT 5;
```

The screenshot shows a MySQL Workbench result grid with the following data:

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

Total quantity of each pizza category ordered.

```
-- Join tables to find the total quantity of each pizza category ordered

• SELECT
    pizza_types.category,
    SUM(order_details.quantity) AS total_quantity
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 total_quantity DESC;
```

Result Grid | Filter Rows:

	category	total_quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

Distribution of orders by hour of the day.

```
1 -- Distribution of orders by hour of the day
2
3 SELECT
4     HOUR(order_time), COUNT(order_id)
5 FROM
6     orders
7 GROUP BY HOUR(order_time)
8
```

hour(order_time)	count(order_id)
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

Category-wise distribution of pizzas.

```
-- Joining tables to find the category-wise distribution of pizzas

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

Result Grid		Filter Rows
	category	count(name)
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

Average number
of pizzas
ordered per day
by grouping
orders by date.

```
1 -- Group the orders by date and calculate the average number of pizzas ordered per day
2
3 • SELECT
4     ROUND(AVG(quantity), 0) as avg_pizzas_ordered_per_day
5 FROM
6     (SELECT
7         orders.order_date, SUM(order_details.quantity) AS quantity
8     FROM
9         orders
10    JOIN order_details ON orders.order_id = order_details.order_id
11    GROUP BY orders.order_date) AS order_sum;
```



The screenshot shows the MySQL Workbench interface with the 'Result Grid' tab selected. The results of the query are displayed in a table with one row. The table has two columns: the first column is empty, and the second column is labeled 'avg_pizzas_ordered_per_day' with the value '138'. There are navigation arrows at the bottom left of the grid.

	avg_pizzas_ordered_per_day
▶	138

Top 3 most ordered pizza types based on revenue.

```
-- Top 3 most ordered pizza types based on revenue

SELECT
    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 order_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.name
ORDER BY revenue DESC
LIMIT 3;
```

Result Grid | Filter Rows:

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

Percentage contribution of each pizza type to total revenue.

```
-- Calculate the percentage contribution of each pizza type to total revenue

SELECT
    pizza_types.category,
    ROUND(SUM(order_details.quantity * pizzas.price) / (SELECT
        ROUND(SUM(order_details.quantity * pizzas.price),
        2) AS Total_Revenue
    )
    FROM
        order_details
        JOIN
            pizzas ON order_details.pizza_id = pizzas.pizza_id) * 100,
    2) AS revenue
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 revenue DESC;
```

	category	revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

Cumulative revenue generated over time.

```
-- Analyze the cumulative revenue generated over time.

select order_date,
round(sum(revenue) over(order by order_date),2) as cum_revenue
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	cum_revenue
2015-01-01	2713.85
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	23990.35
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.3
2015-01-14	32358.7
2015-01-15	34343.5
2015-01-16	36937.65
2015-01-17	39001.75
2015-01-18	40978.6
2015-01-19	43365.75
2015-01-20	45763.65
2015-01-21	47804.2

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

```
-- 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 Reven
from
(select pizza_types.category, pizza_types.name,
round(sum(order_details.quantity * pizzas.price),2) as Revenue
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, pizza_types.name) as sub) as sub2
where Reven <=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	32265.7
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5

A black and white photograph showing a person's hand holding a smartphone. The phone's screen displays a digital scale application with a reading of "0.0". The background is blurred, suggesting motion or a shallow depth of field.

Thank you for
having a look!