

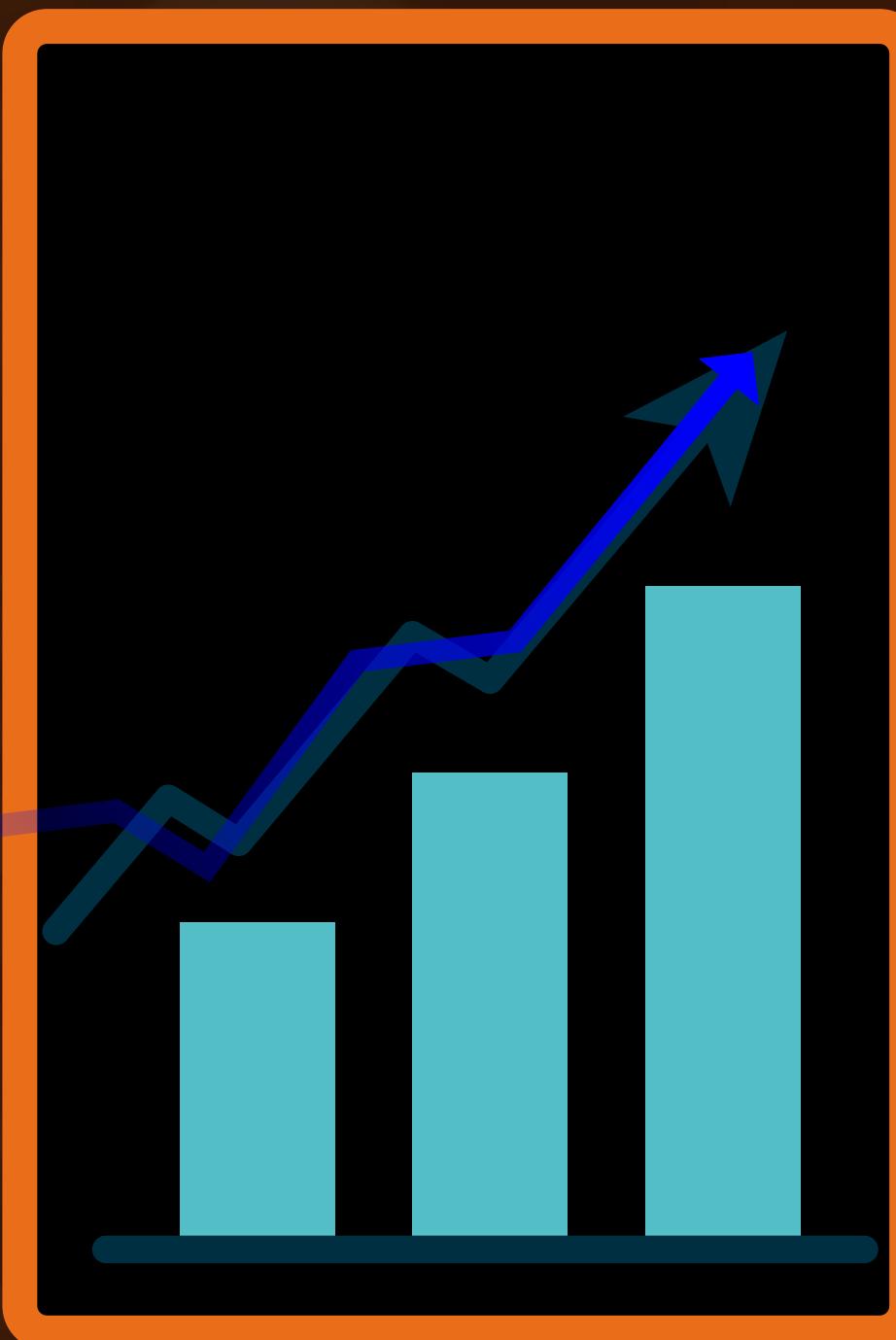
From Dough to Data, From Crust to Chart

INSIGHTS ON PIZZA SALES ANALYSIS USING SQL



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HELLO !

I am Mohan

- This project focuses on data analytics using SQL.
- I utilized SQL queries to analyze and extract key trends from pizza sales data.
- Throughout this project, I explored various SQL queries to address business questions related to pizza sales.

QUESTIONS SOLVED



1. Total number of orders placed.
2. Total revenue generated from pizza sales.
3. Top 5 Highest Priced Pizza.
4. Most Common Pizza Size Ordered.
5. Top 5 Most Ordered Pizza Types Along With Their Quantities.



6. Total Quantity Of Each Pizza Category Ordered.
7. Distribution Of Orders By Hour Of The Day.
8. Category Wise Distribution Of Pizzas.
9. Grouping Of Orders By Date And Calculating Average Number Of Pizzas Ordered Per Day.



10. Top 5 Most Ordered Pizza Based On Revenue.
11. Percentage Contribution Of Each Pizza Type To Total Revenue.
12. Top 3 Most Ordered pizza Types Based On Revenue For Each pizza Category.

INTRODUCTION TO PIZZA SALES ANALYSIS



Brief overview of the dataset:

There are 4 Excel files named
[Pizza Types](#), [Orders](#), [Order Details](#), [Pizzas](#).

[pizza types](#) contain [pizza_type_id](#), name, category, ingredients

[Orders](#) contain [order_id](#), [order_date](#), [order_time](#).

[Order_details](#) contain [order_details_id](#), [order_id](#), [pizza_id](#), quantity.

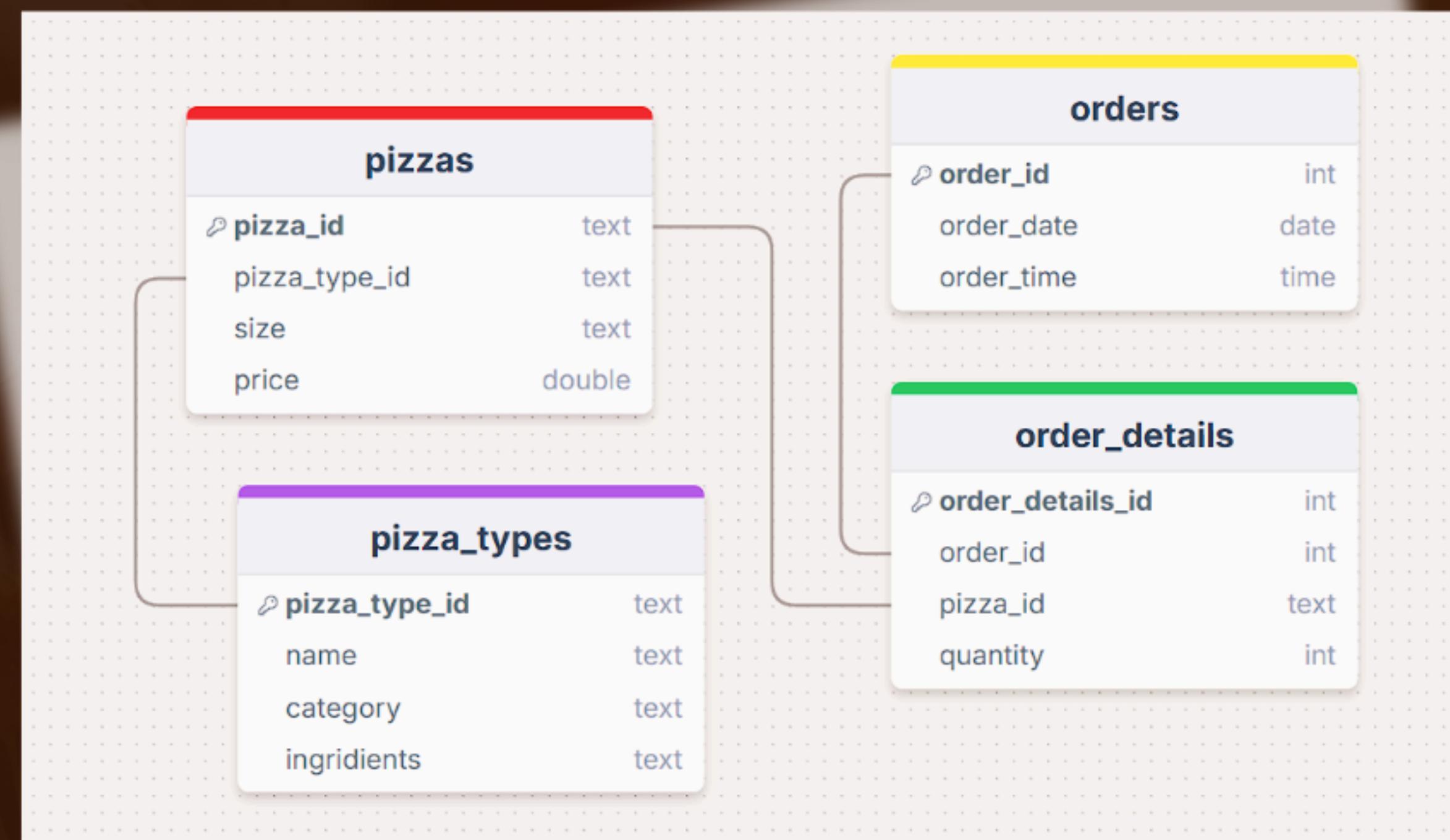
[pizzas](#) contain [pizza_id](#), [pizza_type_id](#), size, price.



Objective of the analysis: identify trends, get more revenue,
identify most liked pizza, and improve sales.

Tools used: SQL for data analysis.

DATA BASE SCHEMA



1. Total number of orders placed.

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

Output:

total_orders
21350



2. Total revenue generated from pizza sales.

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

Output:

total_sales
817860.05



3. Top 5 Highest Priced Pizza.

```
SELECT
    pizza_id, price, pizza_types.name
FROM pizzas
JOIN
    pizza_types ON pizzas.pizza_type_id =
pizza_types.pizza_type_id
ORDER BY price DESC
LIMIT 5;
```

Output:

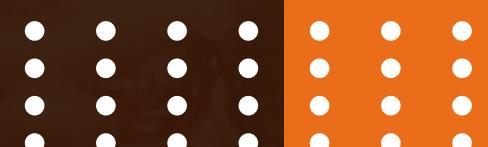
pizza_id	price	name
the_greek_xxl	35.95	The Greek Pizza
the_greek_xl	25.5	The Greek Pizza
brie_carre_s	23.65	The Brie Carre Pizza
ital_veggie_l	21	The Italian Vegetables Pizza
bbq_ckn_l	20.75	The Barbecue Chicken Pizza
⋮	⋮	⋮

4. Most Common Pizza Size Ordered.

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

Output:

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



5. Top 5 Most Ordered Pizza Types Along With Their Quantities.

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

Output:

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



6. Total Quantity Of Each Pizza Category Ordered.

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

Output:

category	type_quantity_order
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050



7. Distribution Of Orders By Hour Of The Day.

```
SELECT  
    HOUR(order_time) AS time, COUNT(order_id) AS order_count  
FROM orders  
GROUP BY time;
```

Output:

time	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

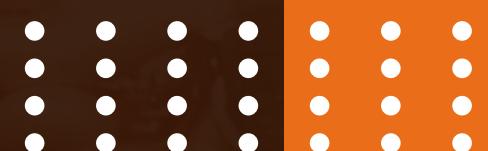


8. Category Wise Distribution Of Pizzas.

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

Output:

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

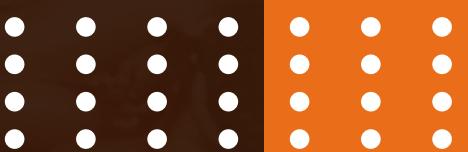


9. Grouping Of Orders By Date And Calculating Average Number Of Pizzas Ordered Per Day.

```
SELECT  
    ROUND(AVG(quant), 0) AS avg_orders_perday  
FROM  
    (SELECT  
        orders.order_date,  
        SUM(order_details.quantity) AS quant  
     FROM orders  
    JOIN order_details ON orders.order_id =  
order_details.order_id  
    GROUP BY orders.order_date) AS order_quantity;
```

Output:

avg_orders_perday
138

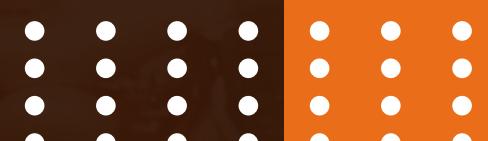


10. Top 5 Most Ordered Pizza Based On Revenue.

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

Output:

revenue	name
43434.25	The Thai Chicken Pizza
42768	The Barbecue Chicken Pizza
41409.5	The California Chicken Pizza
38180.5	The Classic Deluxe Pizza
34831.25	The Spicy Italian Pizza



11. 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
revenue
    FROM order_details
    JOIN pizzas ON order_details.pizza_id = pizzas.pizza_id) *
100,2) AS percentage
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 percentage DESC;
```

Output:

category	percentage
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

12. Top 3 Most Ordered pizza Types Based On Revenue For Each pizza 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 order_details.pizza_id = pizzas.pizza_id
        GROUP BY pizza_types.category, pizza_types.name)
        AS revenue_data)
    AS ranked_pizzas
WHERE rn <= 3;
```

Output:

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	32265.70
Veggie	The Mexicana Pizza	26780.75
Veggie	The Five Cheese Pizza	26066.5

13. Analysis Of Cumulative Revenue Generated Over Time.

```
SELECT
    order_date, revenue,
    ROUND(SUM(revenue) OVER(ORDER BY order_date),2) AS cumulative_revenue
FROM
    (SELECT
        orders.order_date,
        ROUND(SUM(order_details.quantity*pizzas.price),2) 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;
```

INSIGHTS OBTAINED ARE



- The total number of orders placed is 21350.
- The total revenue generated from pizza sales is 817860\$.
- The four most expensive pizzas are:

Greek Pizza XXL, Greek Pizza XL, Brie Carré Pizza, Italian Veg Pizza.

- L is the most commonly ordered pizza size, with a count of 18526.
- The most popular pizza types are Classic Deluxe Pizza (2453) and Barbecue Chicken Pizza (2432).
- The Classic Pizza category, with a count of 14888, ranks as the most ordered.
- Orders peak from 12 pm to 2 pm and from 5 pm to 7 pm.
- There are 6 types of pizzas in the Chicken category, 8 in Classic, and 9 in the Supreme and Veggie categories.
- The average number of orders per day is 138.
- The pizzas that generate the highest revenue are Thai Chicken Pizza, Barbecue Chicken Pizza, and California Chicken Pizza.
- The Chicken category produces the highest revenue.
- All pizza categories contribute equally to total revenue.

THANK YOU FOR ATTENTION

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