

Pizza Sales Analysis



The Pizza Sales Analysis project is an in-depth study conducted using MySQL to uncover insights from a comprehensive dataset of pizza sales. This project aims to analyze various aspects of pizza sales, including revenue generation, order quantities, and customer preferences, to help the business make informed decisions.

Objectives

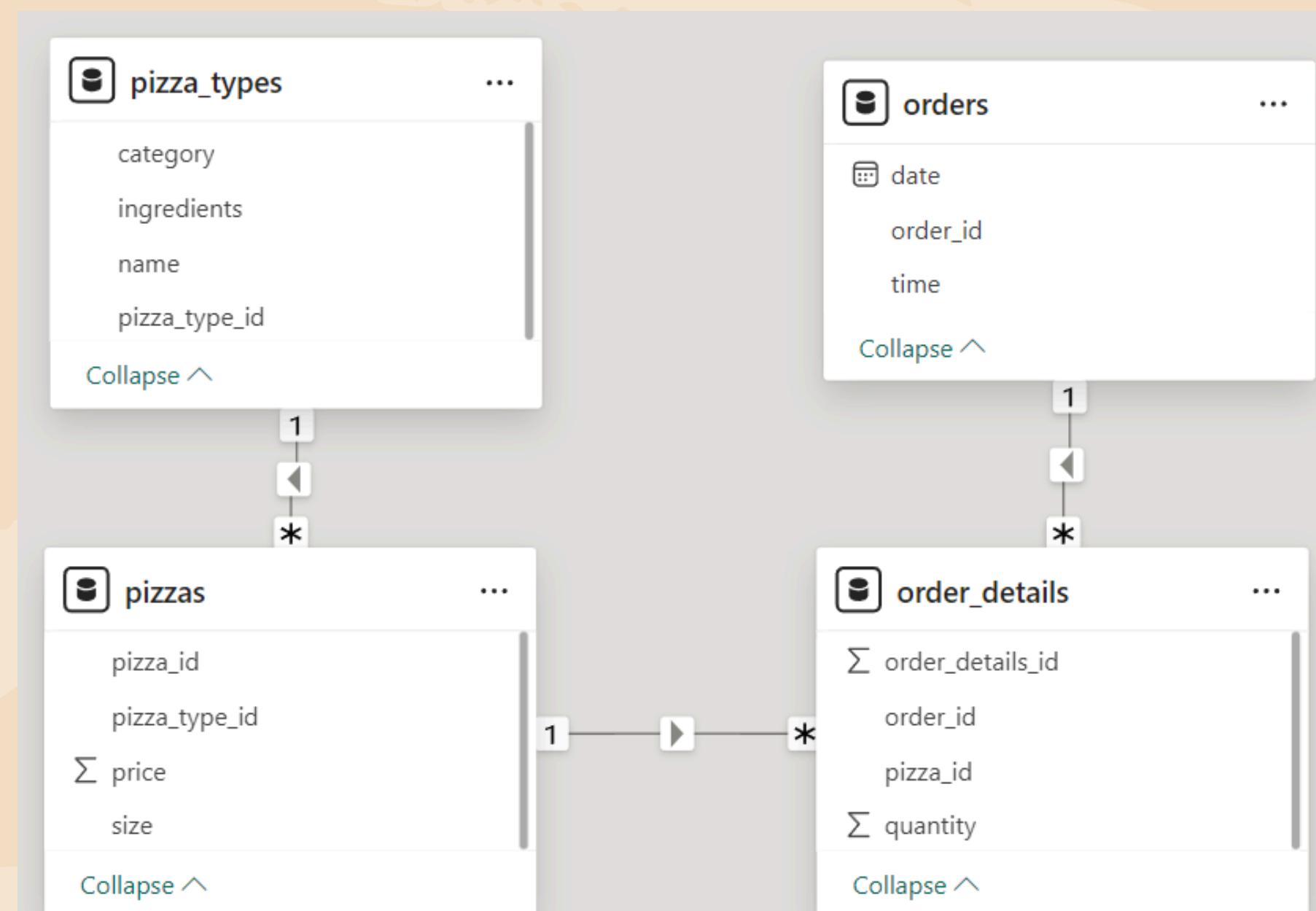
- **Revenue Analysis:** Calculate total and cumulative revenue to understand financial performance
- **Order Trends:** Analyze order quantities by pizza types and sizes to identify popular products
- **Customer Preferences:** Examine sales data to understand customer preferences and purchasing behavior
- **Seasonal Trends:** Evaluate monthly sales data to identify seasonal patterns in pizza sales



Dataset

The dataset used for this project includes the following key tables:

- **Orders:** Contains order IDs, order dates, and customer information.
- **Pizzas:** Lists different pizza types, sizes, and prices.
- **Order Details:** Provides details of each order, including pizza IDs and quantities ordered.
- **Pizza Types:** Describes various pizza types.



Total Number of Orders Placed

```
SELECT  
    COUNT(order_id) as "Total Orders Placed"  
FROM  
    orders;
```

	Total Orders Placed
▶	21350

Total Revenue Generated from Pizza Sales

SELECT

```
    CONCAT((ROUND(SUM(pizzas.price * order_details.quantity)) / 1000), ' K')  
AS 'Total Revenue'
```

FROM

```
order_details
```

JOIN

```
pizzas ON order_details.pizza_id = pizzas.pizza_id;
```

Total Revenue

817.86 K

Highest Priced Pizza

```
SELECT
    pizza_types.name, pizzas.size, pizzas.price
FROM
    pizzas
        JOIN
    pizza_types ON pizzas.pizza_type_id = pizza_types.pizza_type_id
WHERE
    pizzas.price = (SELECT MAX(price) FROM pizzas);
```

	name	size	price
▶	The Greek Pizza	XXL	35.95



Most Common Pizza Size Ordered

```
SELECT
    pizzas.size, SUM(order_details.quantity) AS count_of_orders
FROM
    order_details
        JOIN
    pizzas ON order_details.pizza_id = pizzas.pizza_id
GROUP BY pizzas.size
ORDER BY count_of_orders DESC
LIMIT 1;
```

	size	count_of_orders
▶	L	18956

Top 5 Most Ordered Pizza Types

SELECT

 pizza_types.name, SUM(order_details.quantity) AS count_of_orders

FROM

 order_details

 JOIN

 pizzas ON order_details.pizza_id = pizzas.pizza_id

 JOIN

 pizza_types ON pizzas.pizza_type_id = pizza_types.pizza_type_id

GROUP BY pizza_types.name

ORDER BY count_of_orders DESC

LIMIT 5;

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

Quantity of Each Pizza Category Ordered

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

	category	quantity_ordered
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

Distribution of Orders by Hour of the Day

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

	Hour_of_the_day	Number of Orders
▶	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

Category-Wise Distribution of Pizzas

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

	Category	no_of_pizzas
▶	Chicken	6
	Classic	8
	Supreme	9
	Veggie	9

Average Number of Pizzas Ordered Per Day

```
SELECT  
    ROUND(AVG(pizzas_ordered)) AS Avg_pizzas_per_day  
FROM  
    (SELECT  
        orders.order_date,  
        SUM(order_details.quantity) AS pizzas_ordered  
    FROM  
        orders  
    JOIN order_details ON orders.order_id = order_details.order_id  
    GROUP BY orders.order_date) AS datewise_qty;
```

	Avg_pizzas_per_day
▶	138

Top 3 Pizza Types Based on Revenue

SELECT

```
pizza_types.name,  
SUM(order_details.quantity * pizzas.price) AS Revenue
```

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 3;

	name	Revenue
►	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5

Top 3 Pizza Types Based on Revenue from Each Pizza Category

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



Percentage contribution of each pizza type to total revenue

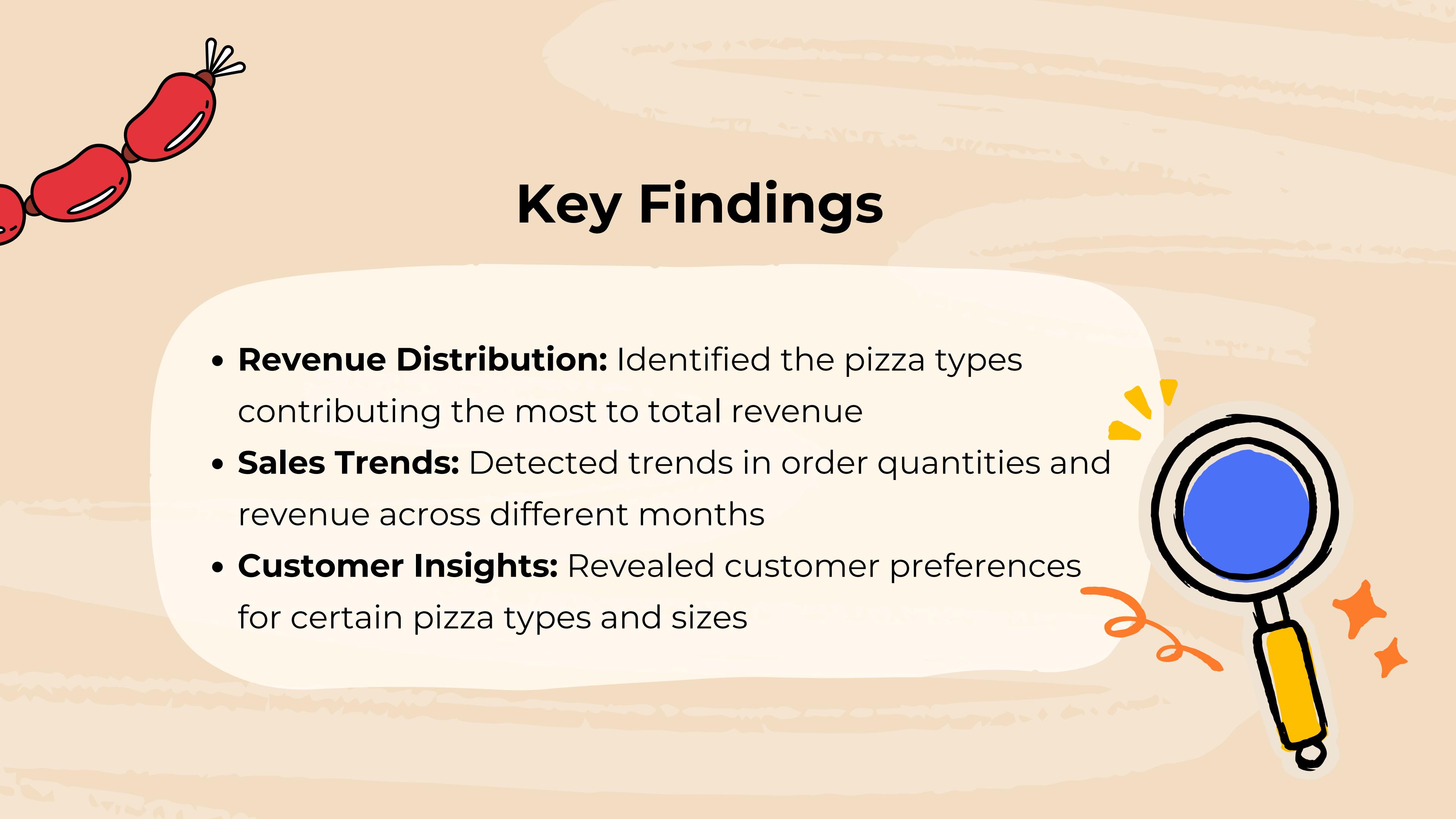
```
SELECT
    pizza_types.category,
    CONCAT(ROUND((SUM(order_details.quantity * pizzas.price) / (SELECT
                                                                SUM(order_details.quantity * pizzas.price)
                                                               FROM
                                                                order_details
                                                               JOIN
                                                                pizzas ON order_details.pizza_id = pizzas.pizza_id)) * 100,
2), "%") AS Percentage_of_Total_Revenue
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.category
ORDER BY Percentage_of_Total_Revenue DESC;
```

Category	Percentage_of_Total_Revenue
Classic	26.91%
Supreme	25.46%
Chicken	23.96%
Veggie	23.68%

Cumulative Revenue Generated Over the Months

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

	month	cumulative_revenue
▶	1	69793
	2	134953
	3	205350
	4	274087
	5	345490
	6	413720
	7	486278
	8	554556
	9	618736
	10	682764
	11	753159
	12	817860



Key Findings

- **Revenue Distribution:** Identified the pizza types contributing the most to total revenue
- **Sales Trends:** Detected trends in order quantities and revenue across different months
- **Customer Insights:** Revealed customer preferences for certain pizza types and sizes

Conclusion

The Pizza Sales Analysis project provides valuable insights that can help the business optimize its offerings, improve customer satisfaction, and enhance overall profitability. Through this analysis, the business can make data-driven decisions to boost sales and achieve long-term growth.

