PIZZA SALES

2024

presented by
Tushar Maurya

2024

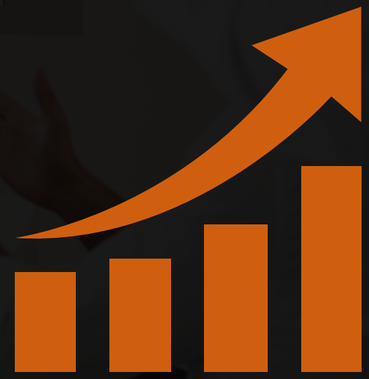
INTRODUCTION

Data-Driven Pizza Sales Analysis

This project leverages SQL to analyze a comprehensive pizza sales dataset. By delving into the data, we uncovered key insights:

- Popular Pizza Types: Identified the most frequently ordered pizzas.
- Peak Sales Periods: Pinpointed the busiest times of the day and week.
- Customer Preferences: Analyzed customer behavior and preferences.
- Sales Trends: Tracked sales performance over time.

These insights can be used to optimize menu offerings, staffing, and marketing strategies to boost sales and customer satisfaction.



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DATA MODEL OVERVIEW

By establishing relationships between these tables, we were able to effectively query and analyze the data to gain valuable insights into sales trends, customer preferences, and popular pizza combinations.

To conduct a comprehensive analysis of pizza sales, we utilized a relational database schema comprising four interconnected tables:

1) Orders:
   - order_id (Primary Key)
   - order_time
   - order_date
2) Order Details:
   - order_details_id (Primary Key)
   - order_id (Foreign Key to Orders)
   - pizza_id (Foreign Key to Pizzas)
   - quantity
3) Pizza Types:
   - pizza_type_id (Primary Key)
   - name
   - category
   - ingredients
4) Pizzas:
   - pizza_id (Primary Key)
   - pizza_type_id (Foreign Key to Pizza Types)
   - size
   - price

IDENTIFY THE HIGHEST-PRICED PIZZA?

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```
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;
```

OUTPUT

	name	price
▶	The Greek Pizza	35.95

IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED?

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

OUTPUT

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

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

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```sql
SELECT
    name, SUM(quantity) AS Quantity
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
        JOIN
    orders ON orders.order_id = orders_details.order_id
GROUP BY name
ORDER BY COUNT(name) DESC
LIMIT 5;
```

OUTPUT

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

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY?

2024

```sql
SELECT
    HOUR(order_time) AS Hour, COUNT(order_id) AS Orders
FROM
    orders
GROUP BY HOUR(order_time)
ORDER BY Orders DESC;
```

OUTPUT

	Hour	Orders
	12	2520
▶	13	2455
	18	2399
	17	2336
	19	2009
	16	1920

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

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

OUTPUT

	category	Quantity
▶	Classic	14579
	Supreme	11777
	Veggie	11449
	Chicken	10815

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

2024

```sql
SELECT
    ROUND(AVG(Quantity), 2) AS Avg_Quantity
FROM
    (SELECT
        ROUND(SUM(quantity), 0) AS Quantity, order_date
    FROM
        orders
    JOIN orders_details ON orders_details.order_id = orders.order_id
    GROUP BY order_date
    ORDER BY AVG(quantity) DESC) AS order_quantity;
```

OUTPUT

	Avg_Quantity
▶	138.47

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE?

2024

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

OUTPUT

	name	revenue
▶	The California Chicken Pizza	83
	The Prosciutto and Arugula Pizza	62.25
	The Barbecue Chicken Pizza	62.25

CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE?

2024

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

OUTPUT

	category	revenue
▶	Classic	26.91
	Veggie	23.68
	Supreme	25.46
	Chicken	23.96

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME?

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```
select order_date, sum(revenue) over(order by order_date) as cum_revenue
from
(SELECT
    order_date, round(SUM(quantity * price),2) AS revenue
FROM
    orders_details
        JOIN
    orders ON orders_details.order_id = orders.order_id
        JOIN
    pizzas ON orders_details.pizza_id = pizzas.pizza_id
GROUP BY order_date) as Sales;
```

OUTPUT

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

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

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```sql
select name, category, ranks from
(select name, category, rank() over(partition by category order by revenue desc) as ranks from
(SELECT
    name, category, SUM(price * quantity) AS revenue
FROM
    pizzas
        JOIN
    orders_details ON pizzas.pizza_id = orders_details.pizza_id
        JOIN
    pizza_types ON pizza_types.pizza_type_id = pizzas.pizza_type_id
GROUP BY category , name
ORDER BY revenue DESC) as Table1) as Table2
where ranks <= 3;
```

OUTPUT

name	category	ranks
The Thai Chicken Pizza	Chicken	1
The Barbecue Chicken Pizza	Chicken	2
The California Chicken Pizza	Chicken	3
The Classic Deluxe Pizza	Classic	1
The Hawaiian Pizza	Classic	2
The Pepperoni Pizza	Classic	3
The Spicy Italian Pizza	Supreme	1
The Italian Supreme Pizza	Supreme	2

THANK YOU!