Slice & Dice – Exploring Pizza Sales with MySQL

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Pizza Sales Insight – Strategic Trends Revealed with SQL

This SQL project focuses on analyzing pizza sales data to uncover trends and insights that drive strategic business decisions.

Overview of the project

The pizza sales project analyzes sales data to generate actionable insights for informed business decisions. The project includes retrieving total orders, calculating overall revenue, identifying the highest-priced pizza and most popular pizza size, listing the top five most ordered pizza varieties, and exploring order distribution by category, time, and revenue performance.

Objective of the project

The pizza sales project focuses on analyzing sales data to gain insights into order volumes, revenue, and customer preferences. Key objectives include extracting total orders, calculating overall revenue, identifying the most expensive pizza, listing the top five pizza varieties, examining order distribution by time and date, and determining the highest revenue-generating pizza types.

Project dataset details

Description: The dataset contains detailed records of pizza sales across various state locations, capturing metrics on transactions, pizza types, customer information, and sales performance. It is designed to support in-depth analysis of sales trends, customer preferences, and regional performance.

Source: The data is sourced from the internet, and you can download it from my GitHub.

Tools used and version

In this project, I used MySQL to query pizza sales data and MS Excel to visualize key trends and insights.

MySQL™

Version: 8.4

Version: 2016

Retrieve the total number of orders placed.

```sql
SELECT
    COUNT(order_id) AS Total_Orders
FROM
    orders;
```

Total_Orders
21350

Calculate the total revenue generated from pizza sales.

```sql
SELECT
    SUM(price) AS Total_revenue
FROM
    pizzas;
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;
```

Total_revenue
817860.05

Identify the highest-priced pizza.

```sql
SELECT
    pizza_types.name, MAX(pizzas.price) AS max_price
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
GROUP BY pizza_types.name
ORDER BY max_price DESC
LIMIT 1;
```

name	max_price
The Greek Pizza	35.95

Identify the most common pizza size ordered.

```sql
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS most_ordered
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY most_ordered DESC
LIMIT 1;
```

size	most_ordered
L	18526

List the top 5 most ordered pizza types along with their quantities.

```sql
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS most_ordered
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY most_ordered DESC
LIMIT 1;
```

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

Join the necessary tables to find the total quantity of each pizza category ordered.

```sql
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;
```

category	total_quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Determine the distribution of orders by hour of the day.

```sql
SELECT
    HOUR(orders.order_time) AS hour,
    COUNT(orders.order_id) AS order_count
FROM
    orders
GROUP BY HOUR(orders.order_time)
ORDER BY hour DESC;
```

hour	order_count
23	28
22	663
21	1198
20	1642
19	2009

Join relevant tables to find the category-wise distribution of pizzas.

```sql
SELECT
    pizza_types.category, COUNT(pizza_types.name) AS Total_Count
FROM
    pizza_types
GROUP BY pizza_types.category
ORDER BY Total_Count DESC;
```

category	Total_Count
Supreme	9
Veggie	9
Classic	8
Chicken	6

Group the orders by date and calculate the average number of pizzas ordered per day.

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

Avg_pizzas_ordered_per_day
138

Determine the top 3 most ordered pizza types based on revenue.

```sql
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS Total_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 Total_Revenue DESC
LIMIT 3;
```

name	Total_Revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

Conclusion

- **Total Orders:** The store processed a total of 21,350 orders, contributing to significant sales activity.
- **Revenue:** Total revenue generated from these orders amounted to $817,860, showcasing the store's strong financial performance.
- **Most Ordered Pizza Size:** The Large size was the most popular among customers, indicating a preference for bigger portions.
- **Top Pizza Category:** The Classic category emerged as the most ordered, reflecting customer loyalty towards traditional pizza offerings.
- **Peak Ordering Time:** The majority of orders were placed around noon, highlighting lunchtime as the busiest period for sales.
- **Average Daily Orders:** On average, the store handled 138 pizza orders per day, offering a consistent flow of sales.

We Value Your Feedback

Feel free to share your suggestions by contacting me through my email or GitHub. Your feedback is highly welcomed and greatly appreciated.