# Sizzling Insights: **The Pizza Data Crunch**

Unveiling Trends & Tastes in Pizza Consumption

# Introduction

- In this presentation, we will delve into the captivating world of pizza orders using SQL analysis. Our goal is to uncover valuable insights about our business by querying data from the pizza database.

- Agenda:

1. **Order Details Analysis:** We'll examine order details to understand sales performance and identify any trends.
2. **Customer Preferences:** By analyzing pizza types, we'll gain insights into customer preferences.
3. **Order Patterns:** We'll explore order data to identify recurring patterns and optimize our processes.

# Key Questions

## Sales Volume and Revenue

- Retrieve the total number of orders placed.
- Calculate the total revenue generated by pizza sales.

## Product Analysis

- Identify the highest priced pizza.
- Identify the total orders based on pizza size.
- List the 5 most ordered pizza types along with their quantities.

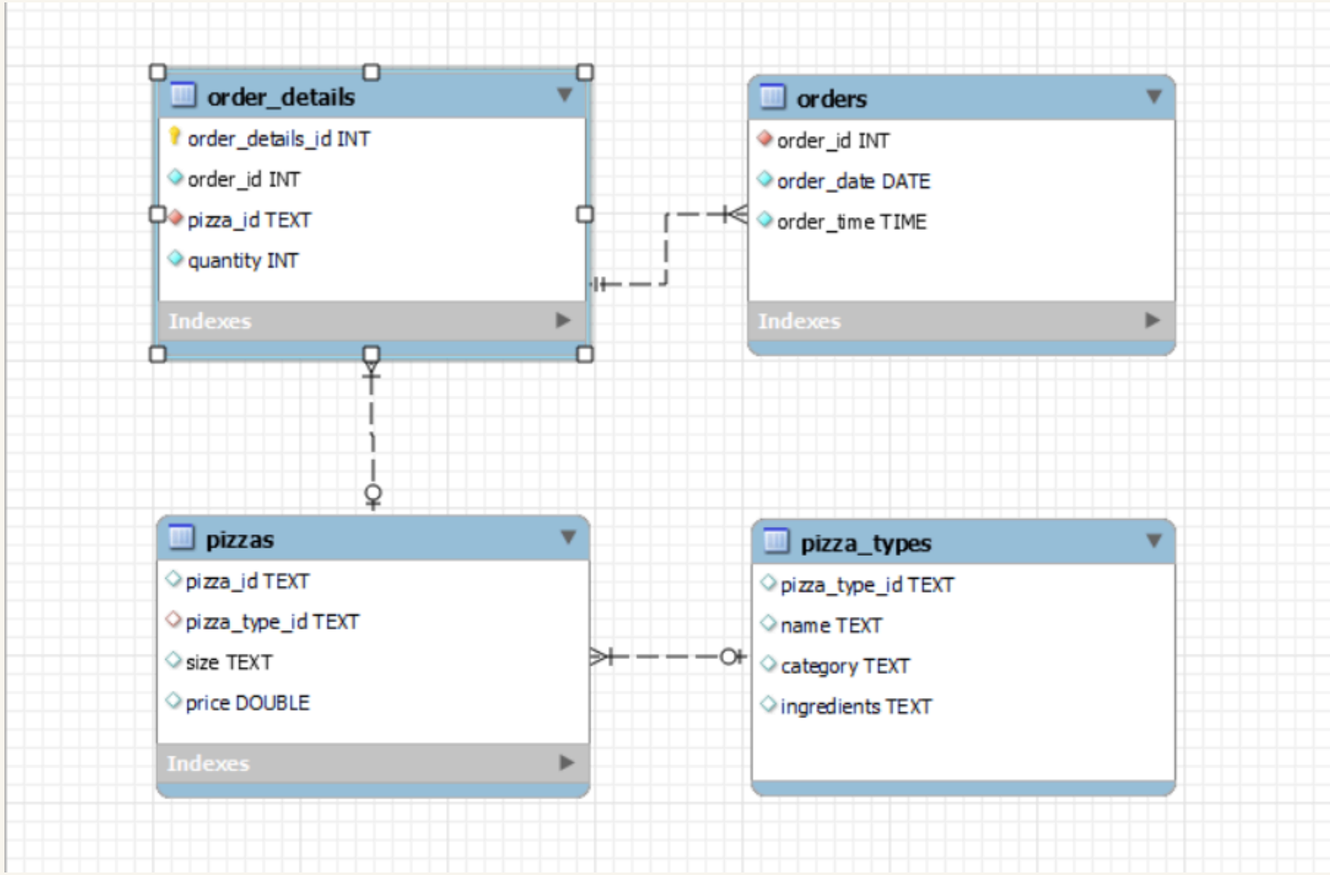
## Category and Time Analysis

- Find the total category of each pizza category ordered.
- Determine the distribution of orders by hour of the day.
- Join the relevant tables and find the category wise distribution of pizzas.

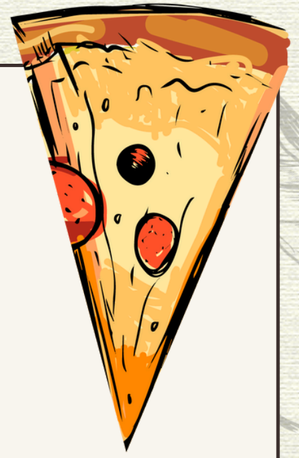
## Trend and Performance Analysis

- Calculate the average number of pizzas ordered per day.
- Determine the top 3 pizzas ordered based upon revenue.
- Calculate the percentage distribution of each pizza type to total revenue.
- Analyze the cumulative revenue generated over time.
- Determine the top 3 most ordered pizza types based on revenue for each pizza category.

# Database Schema



# Retrieve the Total Number of Orders Placed



```sql
SELECT
    COUNT(order_id) as Total_Orders_Placed
FROM
    pizzahut.orders;
```

Result Grid | Filter Rows:

| | Total_Orders_Placed |
|---|---|
| ▶ | 21350 |

# Calculate the Total Revenue Generated by Pizza Sales

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

Result Grid

| Total_Revenue |
| --- |
| 817860.05 |

# Identify the Highest Priced Pizza

```sql
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;
```

Result Grid | Filter Rows

| name | price |
|---|---|
| The Greek Pizza | 35.95 |

# Identify the Total Orders Based on Pizza Size

```sql
SELECT
    size, COUNT(quantity) AS Total_Orders
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY size
ORDER BY Total_orders DESC;
```

| size | Total_Orders |
|---|---|
| L | 18526 |
| M | 15385 |
| S | 14137 |
| XL | 544 |
| XXL | 28 |

# List the 5 Most Ordered Pizza Types Along with Their Quantities

```sql
SELECT
    name, COUNT(quantity) AS Order_Counts
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 name
ORDER BY Order_Counts DESC
LIMIT 5;
```

Result Grid | Filter Rows:

| name | Order_Counts |
|---|---|
| The Classic Deluxe Pizza | 2416 |
| The Barbecue Chicken Pizza | 2372 |
| The Hawaiian Pizza | 2370 |
| The Pepperoni Pizza | 2369 |
| The Thai Chicken Pizza | 2315 |

# Find the Total Category of Each Pizza Category Ordered

```sql
SELECT
    category, SUM(quantity) as Total_Order
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 category;
```

| category | Total_Order |
|---|---|
| Classic | 14888 |
| Veggie | 11649 |
| Supreme | 11987 |
| Chicken | 11050 |

# Determine the Distribution of Orders by Hour of the Day

```sql
SELECT
    HOUR(order_time) as Hour_of_the_Day, COUNT(order_id) as Total_Orders
FROM
    orders
GROUP BY Hour_of_the_Day
order by Hour_of_the_Day;
```

| Hour_of_the_Day | Total_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 |

# Find the Category-Wise Distribution of Pizzas

```sql
SELECT
    category, COUNT(pizza_type_id) as Distribution
FROM
    pizza_types
GROUP BY category;
```

| category | Distribution |
|---|---|
| Chicken | 6 |
| Classic | 8 |
| Supreme | 9 |
| Veggie | 9 |

# Calculate the Average Number of Pizzas Ordered Per Day

```sql
SELECT
     ROUND(AVG(Total_Order)) AS AVG_ORDER
FROM
    (SELECT
        order_date, SUM(quantity) AS Total_order
    FROM
        order_details
    JOIN orders ON order_details.order_id = orders.order_id
    GROUP BY 1) AS table1;
```

| | AVG_ORDER |
|---|---|
| ▶ | 138 |

# Determine the Top 3 Pizzas Ordered Based Upon Revenue

```sql
SELECT
    name, SUM(quantity * price) AS 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 name
ORDER BY 2 DESC
LIMIT 3;
```

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

# Calculate the Percentage Distribution of Each Pizza Type to Total Revenue

```
select category, round((total_price/Total)*100,2) Percentage_Distribution
from (select category, sum(quantity*price) as total_price, sum(sum(quantity*price)) over() as Total
    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 category
    order by 2 desc) as table1
group by category;
```

| category | Percentage_Distribution |
|---|---|
| Classic | 26.91 |
| Supreme | 25.46 |
| Chicken | 23.96 |
| Veggie | 23.68 |

# Analyze the Cumulative Revenue Generated Over Time

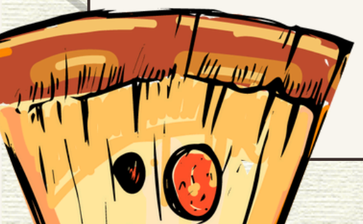
```
select order_date, round(sum(quantity * price),2) as Total_Sales,
Sum(sum(quantity * price)) over (order by order_date) as Cumulative
from order_details
join pizzas
    on order_details.pizza_id = pizzas.pizza_id
join orders
    on order_details.order_id = orders.order_id
group by 1;
```

| order_date | Total_Sales | Cumulative |
|---|---|---|
| 2015-01-01 | 2713.85 | 2713.850000000004 |
| 2015-01-02 | 2731.9 | 5445.75 |
| 2015-01-03 | 2662.4 | 8108.15 |
| 2015-01-04 | 1755.45 | 9863.6 |
| 2015-01-05 | 2065.95 | 11929.55 |
| 2015-01-06 | 2428.95 | 14358.5 |
| 2015-01-07 | 2202.2 | 16560.7 |
| 2015-01-08 | 2838.35 | 19399.05 |
| 2015-01-09 | 2127.35 | 21526.4 |
| 2015-01-10 | 2463.95 | 23990.350000000002 |
| 2015-01-11 | 1872.3 | 25862.65 |
| 2015-01-12 | 1919.05 | 27781.7 |

# Determine the Top 3 Most Ordered Pizza Types Based on Revenue for Each Pizza Category

```sql
With Salesrank as
    (select category, name, sum(quantity*price) as Sales,
    rank() over(partition by category order by sum(quantity*price) desc) as Ranking
    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 1,2)
select Category, Name, Sales
from salesrank
where Ranking<=3;
```

| Category | Name | Sales |
|---|---|---|
| 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 | 32265.70000000065 |
| Veggie | The Mexicana Pizza | 26780.75 |
| Veggie | The Five Cheese Pizza | 26066.5 |



# 21,350

Orders fueled our business, optimizing staffing and inventory.

# Insights

- The analysis revealed that large size pizzas (L) are most commonly ordered.
- The Thai Chicken Pizza (43434.25), The Barbecue Chicken Pizza (42768) and The California Chicken Pizza (41409.5) generates the highest revenue.
- The highest prices pizza is The Greek Pizza (35.95) is contributing significantly to the revenue.
- The average no of pizzas ordered per day is 138.
- The most ordered pizza types based on quantities are The Classic Deluxe Pizza (2416), The Barbecue Chicken Pizza (2372) and The Hawaiian Pizza (2370).
- Cumulative revenue trends provide a long term view of performance.

# In a Nutshell

Our pizza data sings a delicious tale of flavors, cravings, and business brilliance. As I share this project, I invite you to join the pizza party—where data meets delight!

# THANK YOU!

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