Pizza Sales Analysis

Objective

To analyze and visualize various aspects of pizza sales data to gain insights into business performance and understand key trends using SQL and power BI.

This report presents an in-depth analysis of pizza sales performance over a specific period. It includes sales trends, category performance and top-selling products, along with recommendations for optimizing sales.

Dataset Overview

This dataset contains following information:

- Order Date = Date on which orders are placed
- Order Time = Time at which orders are placed
- Pizza Name = Names of pizzas
- Pizza Category = Classic, Chicken, Veggie, Supreme
- Total Price = Price generated over the period
- Quantity Ordered = Number of pizzas ordered by customers
- Pizza Size = Small, Medium, Large, X-Large, XX-Large

Calculated Metrics

- Total Revenue = Sum of total price of all pizzas orders
- Average Order Value = Average amount spent /order
- Total Pizzas Sold = Sum of quantities of all pizzas sold
- Total Orders = Total numbers of orders placed
- Average Pizzas/Order = Average number of pizzas sold /order

SQL Queries

KPI's

Total Revenue

```
select sum(total_price)
from pizza_sales;
```
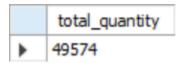
total_revenue
817860.049999993

Average Order Value

```
select sum(total_price) / count(distinct order_id) as avg_order_value
from pizza_sales;
```

	avg_order_value
▶	38.307262295081635

Total Pizza Sales

select sum(quantity) as total_quantity
from pizza_sales;

	total_quantity
▶	49574

Total Orders

select count(order_id) as total_orders
from pizza_sales;

	total_orders
▶	21350

Average Pizzas per Order

select sum(quantity) / count(distinct order_id) as avg_pizza_per_order
from pizza_sales

	avg_pizza_per_order
▶	2.3220

Highest Priced Pizza

select max(total_price) as highest_price
from pizza_sales;

	highest_price
▶	83

Analysis Questions

Daily pizza sales

```
select order_day, total_orders
from (
    select dayname(order_date) as order_day, count(distinct order_id) as total_orders
    from pizza_sales
    group by dayname(order_date)
) as daily_orders
order by field(order_day,
        'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', 'Sunday');
```

order_day	total_orders
Monday	2794
Tuesday	2973
Wednesday	3024
Thursday	3239
Friday	3538
Saturday	3158
Sunday	2624

Hourly pizza sales

```
select hour(order_time) as order_hours, count(distinct order_id) as total_orders
from pizza_sales
group by hour(order_time)
order by hour(order_time);
```

order_hours	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
22	663
23	28

Monthly pizza sales

```
select monthname(order_date) as order_month, round(sum(total_price), 2) as total_sales
from pizza_sales
group by order_month
order by field(order_month,
     'January', 'February', 'March', 'April', 'May', 'June', 'July', 'August', 'September', 'October',
'November', 'December');
```

	order_month	total_sales
▶	January	69793.3
	February	65159.6
	March	70397.1
	April	68736.8
	May	71402.75
	June	68230.2
	July	72557.9
	August	68278.25
	September	64180.05
	October	64027.6
	November	70395.35
	December	64701.15

Percentage of Sales by Pizza Category

```
select pizza_category, round(sum(total_price),2) as total_sales, round(sum(total_price) * 100 /
(select sum(total_price) from pizza_sales),2) as pct
from pizza_sales
group by pizza_category
order by pct desc;
```

	pizza_category	total_sales	pct
▶	Classic	220053.1	26.91
	Supreme	208197	25.46
	Chicken	195919.5	23.96
	Veggie	193690.45	23.68

Percentage of Sales by Pizza Size

```
select pizza_size, round(sum(total_price),2) as total_sales, round(sum(total_price) * 100 / (select
sum(total_price) from pizza_sales),2) as pct_sales_by_size
from pizza_sales
group by pizza_size
order by pct_sales_by_size desc;
```

pizza_size	total_sales	pct_sales_by_size
L	375318.7	45.89
M	249382.25	30.49
S	178076.5	21.77
XL	14076	1.72
XXL	1006.6	0.12

Total Pizzas Sold by Pizza Category

```
select pizza_category, sum(quantity) as total_pizza_sold_by_category
from pizza_sales
group by pizza_category;
```

pizza_category	total_pizza_sold_by_category
Classic	14888
Veggie	11649
Supreme	11987
Chicken	11050

Top 5 Best Sellers by Total Pizzas Sold

```
select pizza_name, sum(quantity) as total_pizza_sold
from pizza_sales
group by pizza_name
order by total_pizza_sold desc
limit 5;
```

pizza_name	total_pizza_sold
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

Bottom 5 Worst Sellers by Total Pizzas Sold

```
select pizza_name, sum(quantity) as total_pizza_sold
from pizza_sales
group by pizza_name
order by total_pizza_sold asc
limit 5;
```

pizza_name	total_pizza_sold
The Brie Carre Pizza	490
The Mediterranean Pizza	934
The Calabrese Pizza	937
The Spinach Supreme Pizza	950
The Soppressata Pizza	961

Top 3 pizza categories by revenue

```
select pizza_category, round(sum(total_price), 2) as total_revenue
from pizza_sales
group by pizza_category
order by total_revenue desc
limit 3;
```

pizza_category	total_revenue
Classic	220053.1
Supreme	208197
Chicken	195919.5

Which pizza size sells most?

```
select pizza_size, sum(quantity) as total_pizzas_sold
from pizza_sales
group by pizza_size
order by total_pizzas_sold desc;
```

pizza_size	total_pizzas_sold
L	18956
M	15635
S	14403
XL	552
XXL	28

Which weekday has the highest average order value?

```
select dayname(order_date) as weekday, round(sum(total_price) / count(distinct order_id), 2) as
avg_order_value
from pizza_sales
group by weekday
order by avg_order_value desc;
```

weekday	avg_order_value
Saturday	39.01
Friday	38.46
Monday	38.41
Tuesday	38.39
Thursday	38.14
Wednesday	37.83
Sunday	37.81

Insights

Sales Performance by Category

- **Classic** pizza is the most selling pizza.

Sales Performance by Size

- The most popular pizza size among the audience is **large**.

Daily Trend

- The orders on **Friday** and **Saturday** are highest, **3538** and **3158** respectively.
- In weekdays, **Thursday** is the busiest day.

Hourly Trend

- There are maximum orders from **12-1 PM** and **5-8 PM**.
- There are almost no orders from **9-10 AM** and **11 PM**.

Monthly Trend

- Most of the pizza orders are from the month of **July**.

Best Sellers

1. **Quantity**
   - **Classic Deluxe** Pizza has the highest sales by quantity.
2. **Revenue**
   - **Thai Chicken** Pizza has the maximum sales by revenue.

3. **Total Orders**
    o **Classic Deluxe** Pizza has the highest orders.

Worst Sellers

1. **Quantity**
    o **Brie Carre** Pizza has the highest sales by quantity.
2. **Revenue**
    o **Brie Carre** Pizza has the maximum sales by revenue.
3. **Total Orders**
    o **Brie Carre** Pizza has the highest orders.

Top-Selling Products

- **Four Cheese** Pizza is the top of veggie pizza.
- **BBQ Chicken** pizza and **Spicy Italian** pizza is the top performer in chicken category and Supreme category, respectively.
- **Classic Deluxe** pizza leads both in sales and revenue.

Recommendations

Based on the insights from the pizza sales, following recommendations are proposed:

- Optimize staffing during peak hours (especially 6-9 PM on weekends).
- Promote best-selling pizzas to increase average order size.
- Offer combo deals during low-sale periods (early afternoon or weekdays).
- Run targeted promotions for chicken and veggie categories to balance demand.