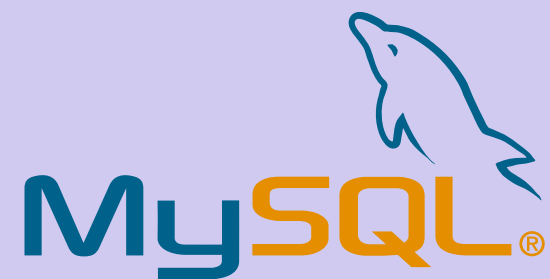


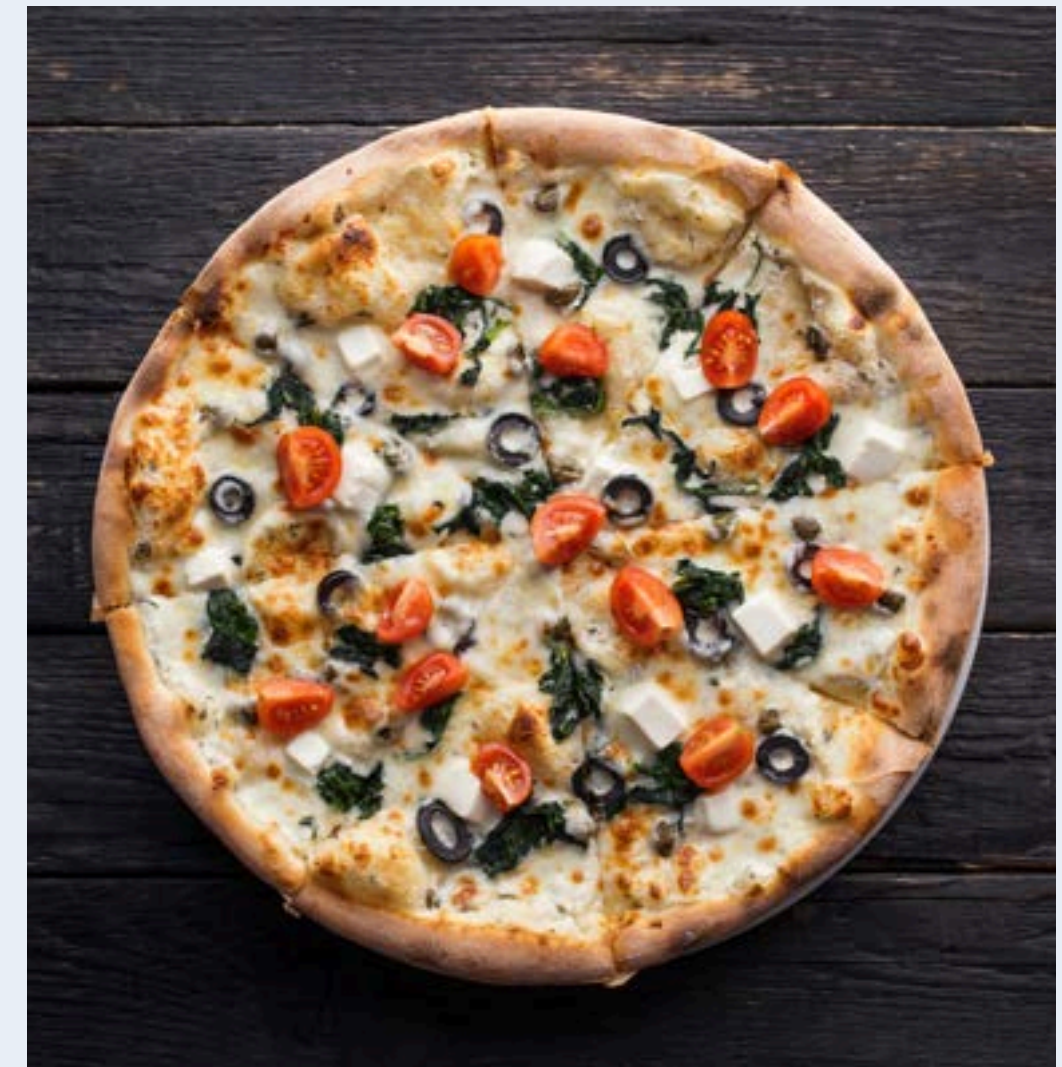
PIZZA SALES ANALYSIS

By: Muhammad Tahir



Introduction

- The purpose of this project was to analyze and optimize sales data for a pizzeria. The analysis was conducted using SQL queries to extract actionable insights, and the findings were visualized on an interactive dashboard built with Power BI.



Objectives

- Identify Key Performance Indicators (KPIs) such as total revenue, total pizzas sold, and average order value.
- Analyze trends in orders based on time (daily and monthly).
- Categorize sales performance by pizza size and category.
- Highlight top and bottom-performing pizzas by revenue, quantity, and orders.

Methodology

A. DATA ANALYSIS

SQL queries were used to process the data and generate insights. Below are some highlights:

- **KPI Calculation:** Key metrics such as total revenue and average order value were derived using aggregate functions.
- **Trend Analysis:** Daily and monthly trends for orders were analyzed to identify patterns.
- **Performance by Category:** Pizza category and size contributions were calculated.
- **Top/Bottom Performers:** Identified top and bottom pizzas in terms of revenue, quantity, and orders.

Methodology

B. DASHBOARD DESIGN

The results were visualized using Power BI. The dashboard was designed to be user-friendly and provided filters for pizza size and category for detailed analysis.

1

What is the total revenue generated from pizza sales?

```
SELECT Round(SUM(total_price), 2) AS Total_Revenue  
FROM pizza_sales;
```



	Total_Revenue
▶	817860.05

The total revenue generated from pizza sales is **\$817,860.05**.

2

What is the average revenue per order?

```
SELECT Round((SUM(total_price) / COUNT(DISTINCT order_id)), 2) AS Avg_Order_Value  
FROM pizza_sales;
```



	Avg_Order_Value
▶	38.31

The average revenue per order is **\$38.31**.

How many pizzas were sold in total?

```
SELECT SUM(quantity) AS Total_Pizza_Sold  
FROM pizza_sales;
```



	Total_Pizza_Sold
▶	49574

A total of **49,574** pizzas were sold.

How many unique orders were placed?

```
SELECT COUNT(DISTINCT order_id) AS Total_Orders  
FROM pizza_sales;
```



	Total_Orders
▶	21350

There were **21,350** unique orders placed.

What is the average number of pizzas sold per order?

```
SELECT ROUND(SUM(quantity)/COUNT(DISTINCT order_id), 2) AS Avg_Pizza_per_Order  
FROM pizza_sales;
```



	Avg_Pizza_per_Order
▶	2.32

On average, **2.32** pizzas were sold per order.

What is the daily trend of total orders placed?

```
SELECT DAYNAME(order_date) AS order_day, COUNT(DISTINCT order_id) as total_orders
FROM pizza_sales
GROUP BY order_day
ORDER BY total_orders DESC;
```



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

The daily trend shows a peak in orders on **Fridays**, with a total of **3,538** orders, followed by **Thursdays** with **3,239** orders. **Saturdays** also perform well, with an average of **3,158** orders.

How do total orders vary across months?

```
SELECT MONTHNAME(order_date) as month_name, COUNT(DISTINCT order_id) as total_orders
FROM pizza_sales
GROUP BY month_name
ORDER BY total_orders DESC;
```



	month_name	total_orders
▶	July	1935
	May	1853
	January	1845
	August	1841
	March	1840
	April	1799
	November	1792
	June	1773
	February	1685
	December	1680
	September	1661
	October	1646

The monthly trend shows a peak in orders during **July**, with a total of **1,953** orders, followed by **May** with **1,853** orders and **January** with **1,845** orders. Other months like **August** and **March** also perform well, each with totals exceeding **1,800** orders.

What percentage of total revenue comes from each pizza category?

```
SELECT pizza_category, CAST(SUM(total_price) AS DECIMAL(10,2)) AS total_revenue,  
       CAST(SUM(total_price) * 100 / (SELECT SUM(total_price) FROM pizza_sales) AS DECIMAL(10,2)) AS PCT  
FROM pizza_sales  
GROUP BY pizza_category;
```




	pizza_category	total_revenue	PCT
▶	Classic	220053.10	26.91
	Veggie	193690.45	23.68
	Supreme	208197.00	25.46
	Chicken	195919.50	23.96

The **Classic** category generates the highest revenue at **26.91%**, followed by **Supreme** at **25.46%**, with **Chicken** and **Veggie** contributing **23.96%** and **23.68%**, respectively.

What percentage of total revenue is contributed by each pizza size?

```
SELECT pizza_size, CAST(SUM(total_price) AS DECIMAL(10,2)) AS total_revenue,  
       CAST(SUM(total_price)*100/(SELECT SUM(total_price) FROM pizza_sales) AS DECIMAL(10,2)) AS PCT  
FROM pizza_sales  
GROUP BY pizza_size;
```



	pizza_size	total_revenue	PCT
▶	M	249382.25	30.49
	L	375318.70	45.89
	S	178076.50	21.77
	XL	14076.00	1.72
	XXL	1006.60	0.12

The **Large (L)** size generates the highest revenue at **45.89%**, followed by **Medium (M)** at **30.49%**, and **Small (S)** at **21.77%**. Other sizes, such as **XL** and **XXL**, contribute minimally.

Which pizza category has the highest total number of pizzas sold overall?

```
SELECT pizza_category, SUM(quantity) AS total_pizzas_sold
FROM pizza_sales
GROUP BY pizza_category
ORDER BY total_pizzas_sold DESC;
```



	pizza_category	total_pizzas_sold
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

The **Classic** pizza category has the highest total number of pizzas sold overall, with a total of **14,388** pizzas sold.

Which are the top 5 pizzas contributing the highest revenue?

```
SELECT pizza_name, SUM(total_price) AS total_revenue
FROM pizza_sales
GROUP BY pizza_name
ORDER BY total_revenue DESC
LIMIT 5;
```



	pizza_name	total_revenue
▶	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5
	The Classic Deluxe Pizza	38180.5
	The Spicy Italian Pizza	34831.25

The **top 5** pizzas contributing the **highest revenue** are: The Thai Chicken Pizza, The Barbecue Chicken Pizza, The California Chicken Pizza, The Classic Deluxe Pizza, The Spicy Italian Pizza.

Which are the bottom 5 pizzas contributing the least revenue?

```
SELECT pizza_name, SUM(total_price) AS total_revenue
FROM pizza_sales
GROUP BY pizza_name
ORDER BY total_revenue ASC
LIMIT 5;
```



	pizza_name	total_revenue
▶	The Brie Carre Pizza	11588.499999999999
	The Green Garden Pizza	13955.75
	The Spinach Supreme Pizza	15277.75
	The Mediterranean Pizza	15360.5
	The Spinach Pesto Pizza	15596

The **bottom 5** pizzas contributing the **least revenue** are: The Brie Carre Pizza, The Green Garden Pizza, The Spinach Supreme Pizza, The Mediterranean Pizza, The Spinach Presto Pizza.

Which are the top 5 pizzas sold in the highest quantities?

```
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

The **top 5** pizzas sold in the **highest quantities** are: The Classic Deluxe Pizza, The Barbecue Chicken Pizza, The Hawaiian Pizza, The Pepperoni Pizza, The Thai Chicken Pizza.

Which are the bottom 5 pizzas sold in the lowest quantities?

```
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

The **bottom 5** pizzas sold in the **lowest quantities** are: The Brie Carre Pizza, The Mediterranean Pizza, The Calabrese Pizza, The Spinach Supreme Pizza, The Soppressata Pizza.

Which are the top 5 pizzas with the highest number of orders?

```
SELECT pizza_name, COUNT(DISTINCT order_id) AS total_orders
FROM pizza_sales
GROUP BY pizza_name
ORDER BY total_orders DESC
LIMIT 5;
```



	pizza_name	total_orders
▶	The Classic Deluxe Pizza	2329
	The Hawaiian Pizza	2280
	The Pepperoni Pizza	2278
	The Barbecue Chicken Pizza	2273
	The Thai Chicken Pizza	2225

The **top 5** pizzas with the **highest number of orders** are: The Classic Deluxe Pizza, The Hawaiian Pizza, The Pepperoni Pizza, The Barbecue Chicken Pizza, The Thai Chicken Pizza.

Which are the bottom 5 pizzas with the lowest number of orders?

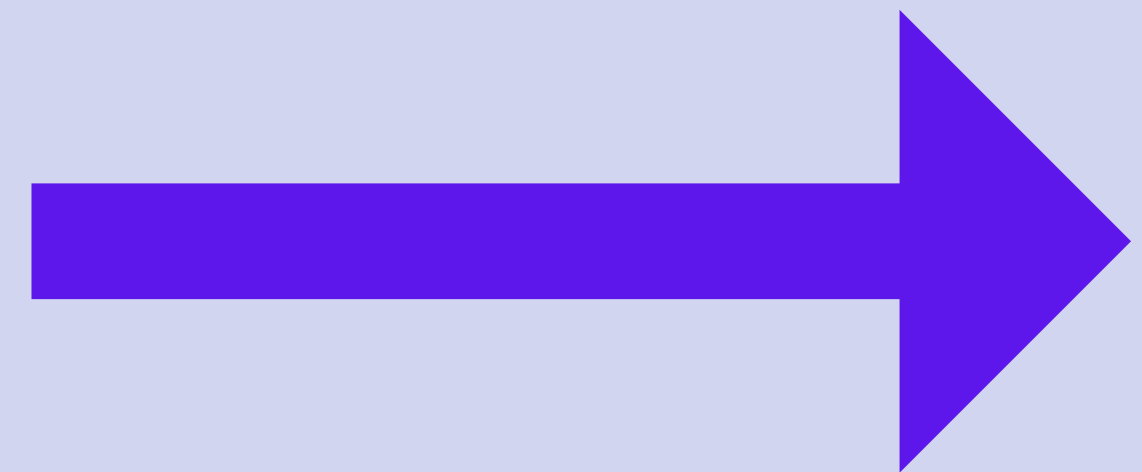
```
SELECT pizza_name, COUNT(DISTINCT order_id) AS total_orders
FROM pizza_sales
GROUP BY pizza_name
ORDER BY total_orders ASC
LIMIT 5;
```



	pizza_name	total_orders
▶	The Brie Carre Pizza	480
	The Mediterranean Pizza	912
	The Calabrese Pizza	918
	The Spinach Supreme Pizza	918
	The Chicken Pesto Pizza	938

The **bottom 5** pizzas with the **lowest number of orders** are: The Brie Carre Pizza, The Mediterranean Pizza, The Calabrese Pizza, The Spinach Supreme Pizza, The Chicken Pesto Pizza.

DASHBOARD





PIZZA SALES REPORT

Jan/15 - Dec/15

Pizza Category

All

1/1/2015

12/31/2015



Home



Best/Worst Seller

BUSIEST DAYS AND TIMES

DAYS

Orders are **highest** on weekends, **Friday/Saturday** evenings.

MONTHLY

There are **maximum** orders from month of **July** and **January**.

SALES PERFORMANCE

CATEGORY

Classic category contributes to **maximum** sales & total orders.

SIZE

Large size pizza contributes to **maximum** sales.

817.86K

Total Revenue



38.31

Average Order Value



49574

Total Pizzas Sold



21350

Total Orders

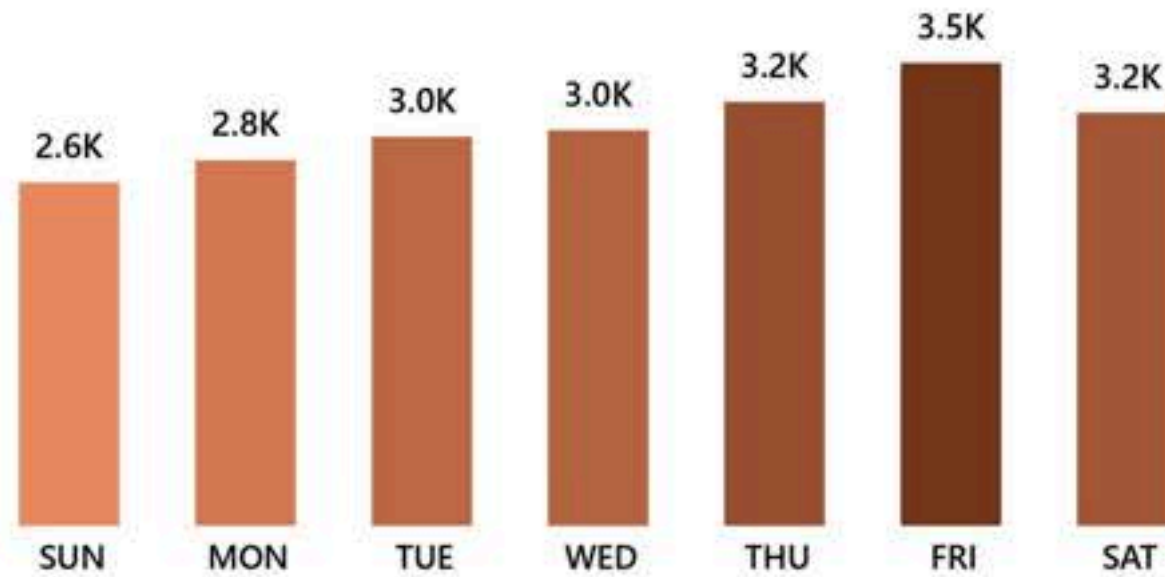


2.32

Avg Pizzas per Order



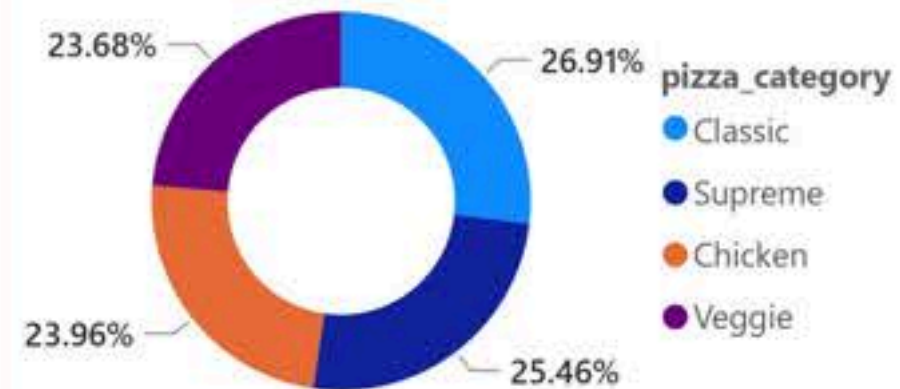
Daily Trend for Total Orders



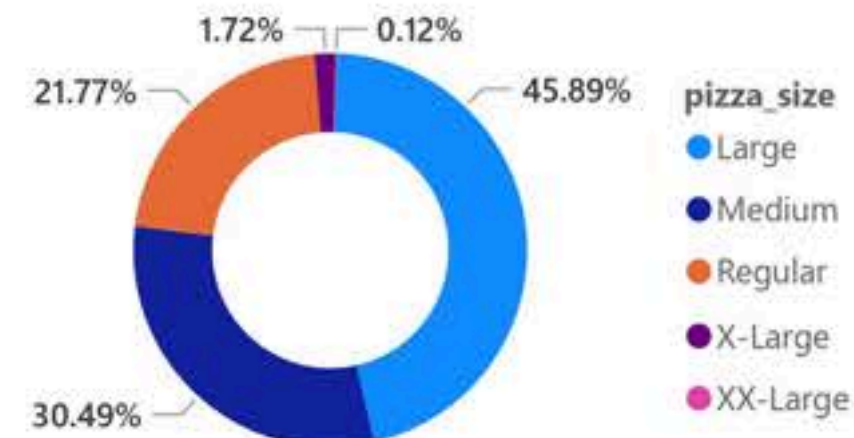
Monthly Trend for Total Orders



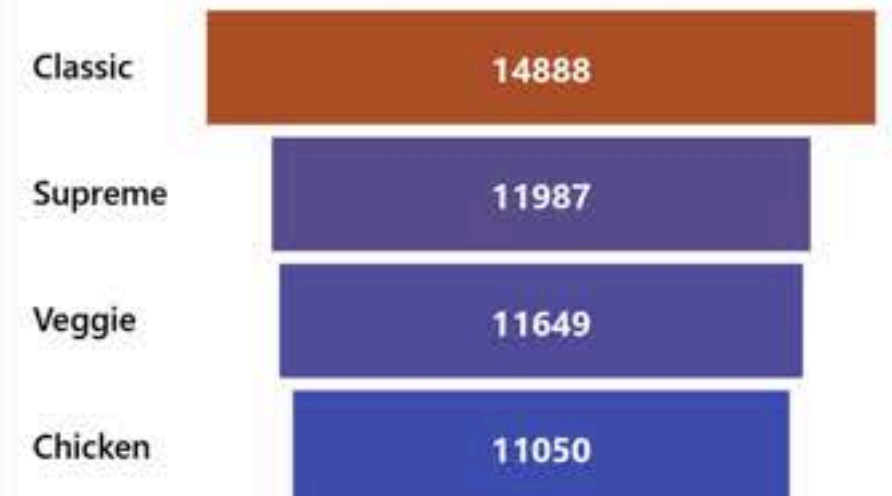
% of Sales by Pizza Category



% of Sales by Pizza Size



Total Pizzas Sold by Pizza Category





PIZZA SALES REPORT

Jan/15-Dec/15

Pizza Category

All

1/1/2015

12/31/2015



Home



Best/Worst Seller



BEST SELLERS

REVENUE

The Thai Chicken Pizza Contributes to maximum Revenue.

QUANTITY

The Classic Deluxe Pizza Contributes to maximum Total Quantities.

TOTAL ORDERS

The Classic Deluxe Pizza Contributes to maximum Total Orders.

WORST SELLERS

REVENUE

The Brie Carre Pizza Contributes to minimum Revenue.

QUANTITY

The Brie Carre Pizza Contributes to minimum Total Quantities.

TOTAL ORDERS

The Brie Carre Pizza Contributes to minimum Total Orders.

817.86K

Total Revenue



38.31

Average Order Value



49574

Total Pizzas Sold



21350

Total Orders

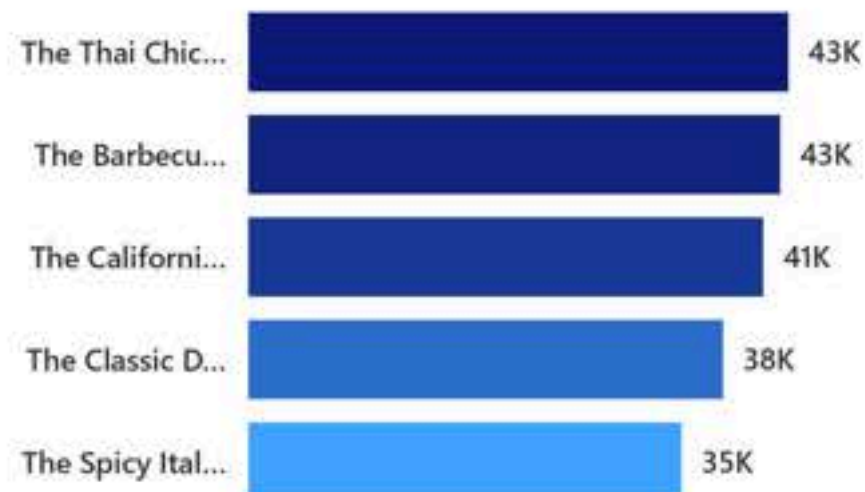


2.32

Avg Pizzas per Order



Top 5 pizzas by Revenue



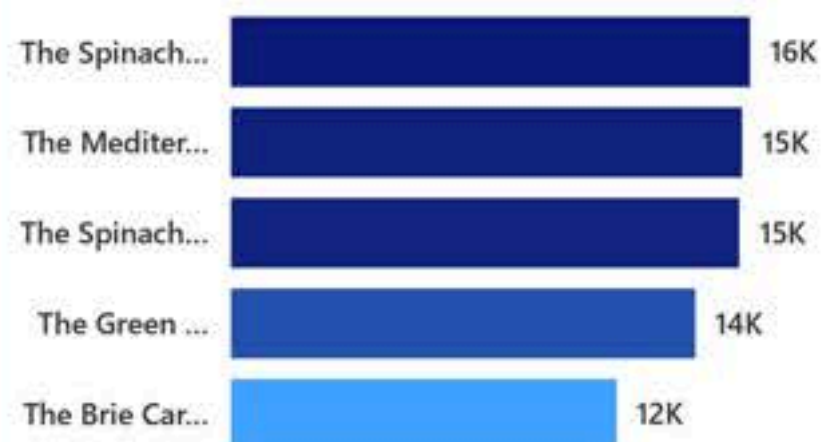
Top 5 pizzas by Quantity



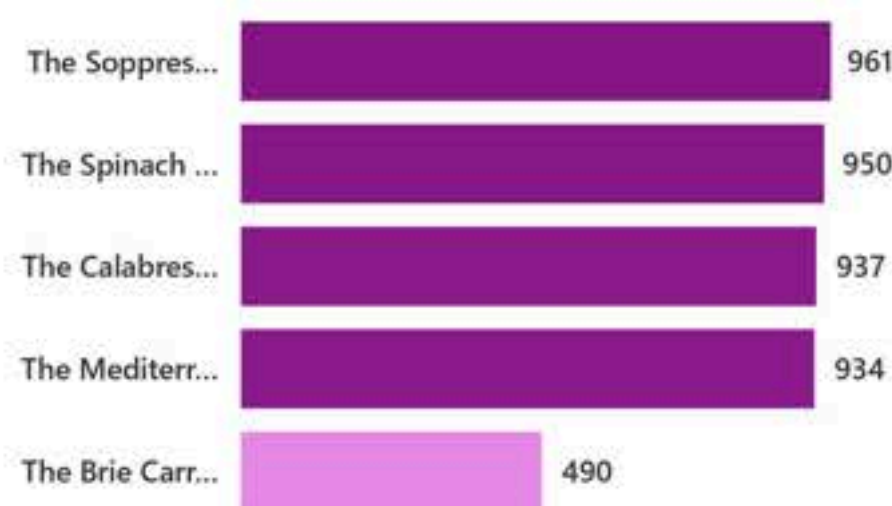
Top 5 pizzas by Total Orders



Bottom 5 pizzas by Revenue



Bottom 5 pizzas by Quantity



Bottom 5 pizzas by Total Orders

