PIZZA SALES ANALYSIS USING SQL AND POWER BI

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OBJECTIVE

- To analyze pizza sales data and derive insights to answer various business questions.
- To analyze customer preferences and demographics to tailor marketing strategies.

SOFTWARE USED

- MS OFFICE/ EXCEL
- MS SQL SERVER
- SQL SERVER MANAGEMENT STUDIO
- POWER BI

PROBLEM STATEMENT

KPI's REQUIREMENT

We need to analyze key indicators for our pizza sales data to gain insights into our business performance. Specifically, we want to calculate the following metrics:

1. Total Revenue: The sum of the total price of all pizza orders.
2. Average Order Value: The average amount spent per order, calculated by dividing the total revenue by the total number of orders.
3. Total Pizzas Sold: The sum of the quantities of all pizzas sold.
4. Total Orders: The total number of orders placed.
5. Average Pizzas Per Order: The average number of pizzas sold per order, calculated by dividing the total number of pizzas sold by the total number of orders.

PROBLEM STATEMENT

CHARTS REQUIREMENT

We would like to visualize various aspects of our pizza sales data to gain insights and understand key trends.

1.Daily Trend for Total Orders:
Create a bar chart that displays the daily trend of total orders over a specific time period. This
chart will help us identify any patterns or fluctuations in order volumes on a daily basis.

2.Monthly Trend for Total Orders:
Create a line chart that illustrates the hourly trend of total orders throughout the day. This chart will allow us to identify peak hours or periods of high order activity.

PROBLEM STATEMENT

CHARTS REQUIREMENT

3.Percentage of Sales by Pizza Category:
Create a pie chart that shows the distribution of sales across different pizza categories. This chart will provide insights into the popularity of various pizza categories and their contribution to overall sales.

4. Percentage of Sales by Pizza Size:
Generate a pie chart that represents the percentage of sales attributed to different pizza sizes. This chart will help us understand customer preferences for pizza sizes and their impact on sales.

PROBLEM STATEMENT

CHARTS REQUIREMENT

5.Total Pizzas Sold by Pizza Category:
Create a funnel chart that presents the total number of pizzas sold for each pizza category. This chart will allow us to compare the sales performance of different pizza categories.

6.Top 5 Best Sellers by Revenue, Total Quantity and Total Orders:
Create a bar chart highlighting the top 5 best-selling pizzas based on the Revenue, Total Quantity, Total Orders. This chart will help us identify the most popular pizza options.

PROBLEM STATEMENT

CHARTS REQUIREMENT

7. Bottom 5 Best Sellers by Revenue, Total Quantity and Total Orders:

Create a bar chart showcasing the bottom 5 worst-selling pizzas based on the Revenue, Total Quantity, Total Orders. This chart will enable us to identify underperforming or less popular pizza options.

PIZZA SALES SQL QUERIES

A. KPI's

1. Total Revenue:

```
SELECT SUM(total_price) AS Total_Revenue FROM pizza_sales;
```

Results Messages

	Total_Revenue
1	817860.05083847

PIZZA SALES SQL QUERIES

A. KPI’s

2. Average Order Value

```
SELECT (SUM(total_price) / COUNT(DISTINCT order_id)) AS Avg_order_Value FROM pizza_sales
```

Results | Messages

	Avg_order_Value
1	38.3072623343546

PIZZA SALES SQL QUERIES

A. KPI’s

3. Total Pizzas Sold

```
SELECT SUM(quantity) AS Total_pizza_sold FROM pizza_sales
```

Results | Messages

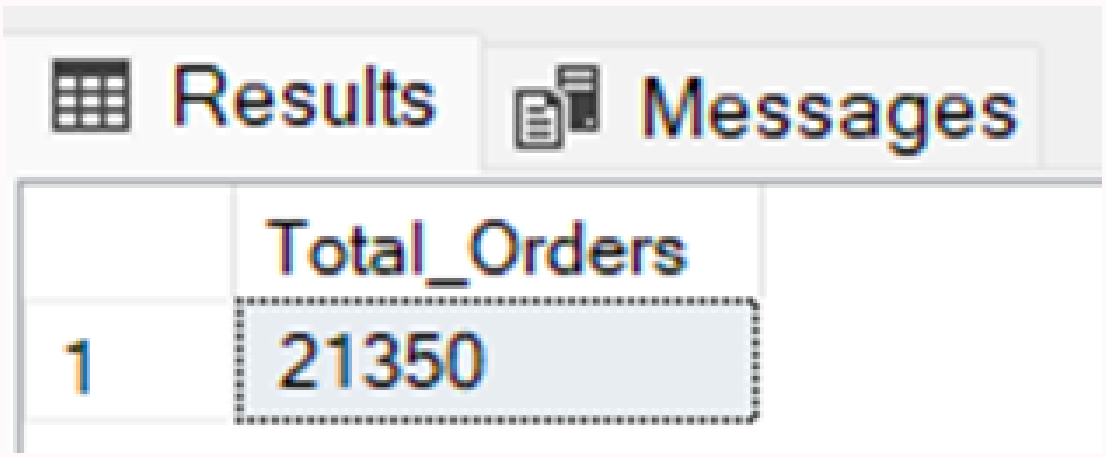
	Total_pizza_sold
1	49574

PIZZA SALES SQL QUERIES

A. KPI’s

4. Total Orders

SELECT COUNT(DISTINCT order_id) AS Total_Orders FROM pizza_sales

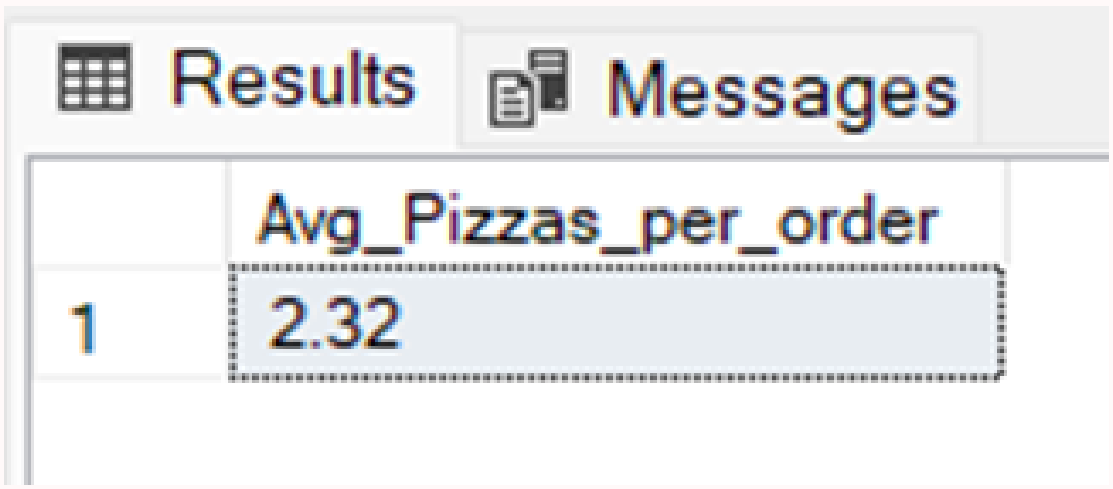


PIZZA SALES SQL QUERIES

A. KPI's

5. Average Pizzas Per Order

```
SELECT CAST(CAST(SUM(quantity) AS DECIMAL(10,2)) /
CAST(COUNT(DISTINCT order_id) AS DECIMAL(10,2)) AS
DECIMAL(10,2))
AS Avg_Pizzas_per_order
FROM pizza_sales
```



PIZZA SALES SQL QUERIES

B. Daily Trend for Total Orders

```
SELECT DATENAME(DW, order_date) AS order_day,
COUNT(DISTINCT order_id) AS total_orders
FROM pizza_sales
GROUP BY DATENAME(DW, order_date)
```

Results | Messages

	order_day	total_orders
1	Saturday	3158
2	Wednesday	3024
3	Monday	2794
4	Sunday	2624
5	Friday	3538
6	Thursday	3239
7	Tuesday	2973

PIZZA SALES SQL QUERIES

C. Monthly Trend for Orders

```
select DATENAME(MONTH, order_date) as Month_Name,
COUNT(DISTINCT order_id) as Total_Orders
from pizza_sales
GROUP BY DATENAME(MONTH, order_date)
```

	Month_Name	Total_Orders
1	February	1685
2	June	1773
3	August	1841
4	April	1799
5	May	1853
6	December	1680
7	January	1845
8	September	1661
9	October	1646
10	July	1935
11	November	1792
12	March	1840

PIZZA SALES SQL QUERIES

D. % of Sales by 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
```

Results | Messages

	pizza_category	total_revenue	PCT
1	Classic	220053.10	26.91
2	Chicken	195919.50	23.96
3	Veggie	193690.45	23.68
4	Supreme	208197.00	25.46

PIZZA SALES SQL QUERIES

E. % of Sales by 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
ORDER BY PCT
```

Results | Messages

	pizza_size	total_revenue	PCT
1	L	375318.70	45.89
2	M	249382.25	30.49
3	S	178076.50	21.77
4	XL	14076.00	1.72
5	XXL	1006.60	0.12

PIZZA SALES SQL QUERIES

F. Total Pizzas Sold by Pizza Category

```
SELECT pizza_category, SUM(quantity) as Total_Quantity_Sold
FROM pizza_sales
GROUP BY pizza_category
ORDER BY Total_Quantity_Sold DESC
```

Results | Messages

	pizza_category	Total_Quantity_Sold
1	Classic	14888
2	Supreme	11987
3	Veggie	11649
4	Chicken	11050

PIZZA SALES SQL QUERIES

G. Top 5 Pizzas by Revenue

```
SELECT Top 5 pizza_name, SUM(total_price) AS Total_Revenue
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Revenue DESC
```

Results | Messages

	pizza_name	Total_Revenue
1	The Thai Chicken Pizza	43434.25
2	The Barbecue Chicken Pizza	42768
3	The California Chicken Pizza	41409.5
4	The Classic Deluxe Pizza	38180.5
5	The Spicy Italian Pizza	34831.25

PIZZA SALES SQL QUERIES

H. Bottom 5 Pizzas by Revenue

```
SELECT Top 5 pizza_name, SUM(total_price) AS Total_Revenue
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Revenue ASC
```

	pizza_name	Total_Revenue
1	The Brie Carre Pizza	11588.4998130798
2	The Green Garden Pizza	13955.75
3	The Spinach Supreme Pizza	15277.75
4	The Mediterranean Pizza	15360.5
5	The Spinach Pesto Pizza	15596

PIZZA SALES SQL QUERIES

I. Top 5 Pizzas by Quantity

```
SELECT Top 5 pizza_name, SUM(quantity) AS Total_Pizza_Sold
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Pizza_Sold DESC
```

	pizza_name	Total_Pizza_Sold
1	The Classic Deluxe Pizza	2453
2	The Barbecue Chicken Pizza	2432
3	The Hawaiian Pizza	2422
4	The Pepperoni Pizza	2418
5	The Thai Chicken Pizza	2371

PIZZA SALES SQL QUERIES

J. Bottom 5 Pizzas by Quantity

```
SELECT TOP 5 pizza_name, SUM(quantity) AS Total_Pizza_Sold
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Pizza_Sold ASC
```

Results | Messages

	pizza_name	Total_Pizza_Sold
1	The Brie Carre Pizza	490
2	The Mediterranean Pizza	934
3	The Calabrese Pizza	937
4	The Spinach Supreme Pizza	950
5	The Soppressata Pizza	961

PIZZA SALES SQL QUERIES

K. Top 5 Pizzas by Total Orders

```
SELECT Top 5 pizza_name, COUNT(DISTINCT order_id) AS Total_Orders
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Orders DESC
```

Results | Messages

	pizza_name	Total_Orders
1	The Classic Deluxe Pizza	2329
2	The Hawaiian Pizza	2280
3	The Pepperoni Pizza	2278
4	The Barbecue Chicken Pizza	2273
5	The Thai Chicken Pizza	2225

PIZZA SALES SQL QUERIES

L. Bottom 5 Pizzas by Total Orders

```
SELECT Top 5 pizza_name, COUNT(DISTINCT order_id) AS Total_Orders
FROM pizza_sales
GROUP BY pizza_name
ORDER BY Total_Orders ASC
```

	pizza_name	Total_Orders
1	The Brie Carre Pizza	480
2	The Mediterranean Pizza	912
3	The Spinach Supreme Pizza	918
4	The Calabrese Pizza	918
5	The Chicken Pesto Pizza	938

POWER BI DASHBOARD

PIZZA SALES REPORT

Jan/15-Dec/15

Pizza Category: All

03-03-2015 — 05-11-2015

Home

Best/Worst Sellers

BUSIEST DAYS & TIMES

DAYS

Orders are highest on weekends, Friday/Saturday evenings.

MONTHLY

There are maximum orders from month of July and January.

SALES PERFORMANCE

CATEGORY

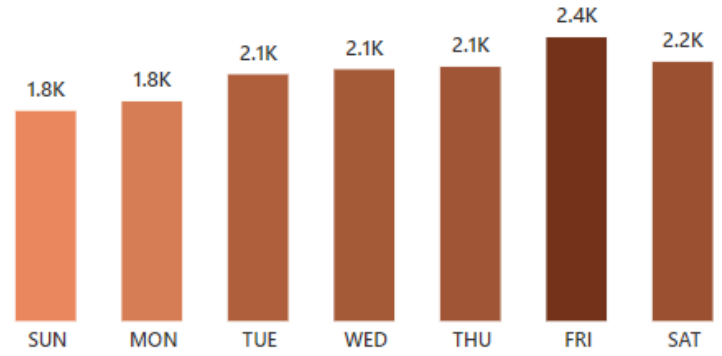
Classic Category contributes to maximum sales & total orders.

SIZE

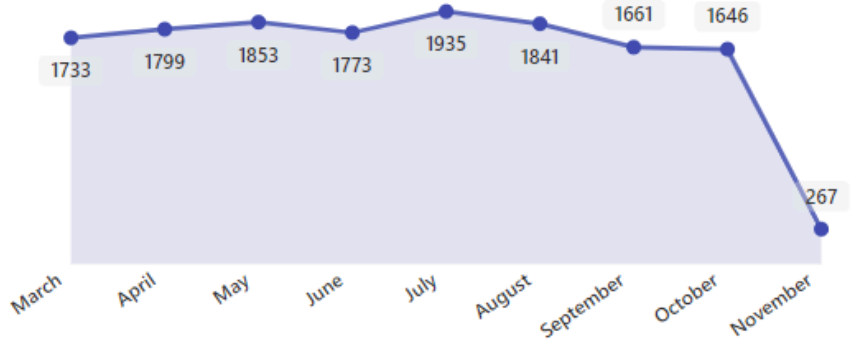
Large size pizza contributes to maximum sales.

Total Revenue	Avg Order Value	Total Orders	Total Pizza Sold	Avg Pizzas Per Order
554.09K	38.19	14508	33563	2.31

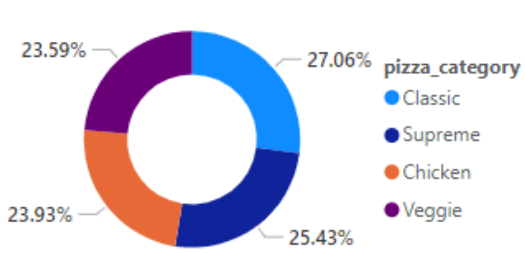
Daily Trend for Total Orders



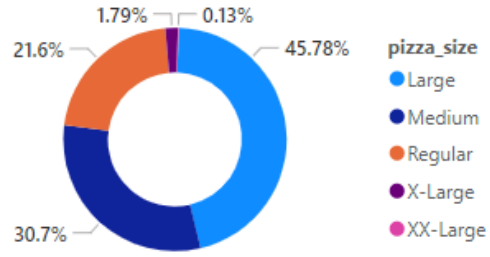
Monthly Trend for Total Orders



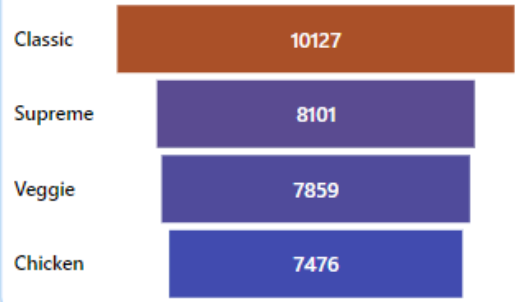
% of Sales by Pizza Category



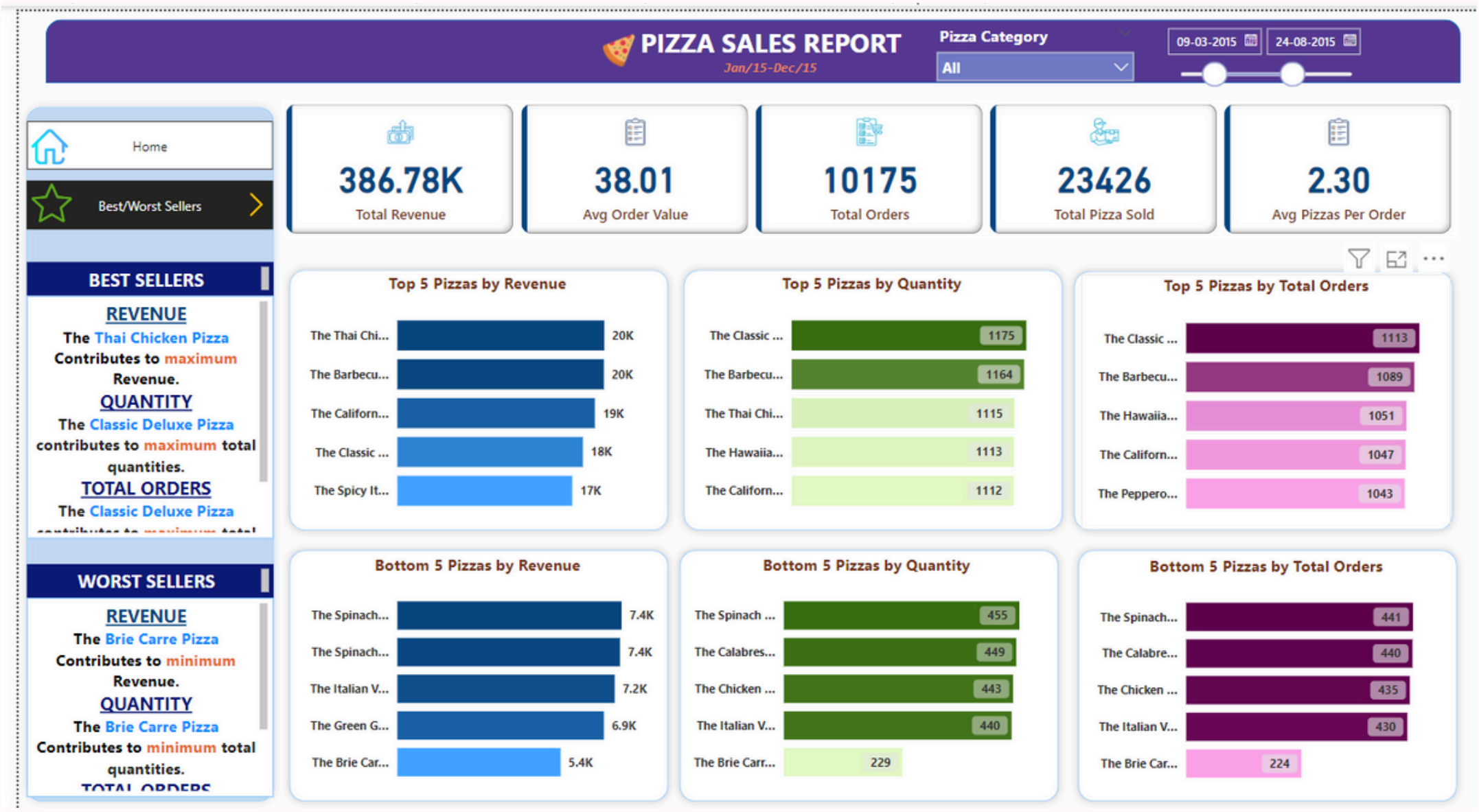
% of Sales by Pizza Size



Total Pizza Sold by Pizza Category



POWER BI DASHBOARD



Thank You!