

PIZZA SALES ANALYSIS USING POWER BI AND SQL



- INTRODUCTION

- OBJECTIVE

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- Tools and Technologies

- Data Insights and Analysis

- Analysis Using Power bi

- Analysis Using Sql

- CONCLUSION

INTRODUCTION

The Pizza Sales Analysis project utilizes Power BI and SQL to analyze sales data, providing insights into top-performing and least-performing pizza categories. This project highlights proficiency in data visualization and querying for actionable insights.

OBJECTIVE

- Calculating the total revenue generated from pizza sales.
- Determining the total quantity of pizzas sold.
- Analyzing daily and monthly sales trends for total orders.
- Calculating the percentage of sales by pizza category and pizza size.
- Identifying sales performance metrics for pizza categories and individual pizzas, including:
 - Top 5 pizzas by revenue, total orders, and quantity sold
 - Bottom 5 pizzas by revenue, total orders, and quantity sold.

TOOLS AND TECHNOLOGIES

- Power BI: Used for creating interactive dashboards, charts, and visualizations.
- SQL: Used for querying and processing data efficiently.

DATA INSIGHTS AND ANALYSIS

1. Total Revenue

- SQL queries were used to aggregate the total revenue from the sales data.
- The total revenue was visualized in Power BI using a KPI card for an at-a-glance view of performance.

2. Total Pizza Sold

- The total quantity of pizzas sold was calculated by summing the quantity column in the dataset.
- A card visualization in Power BI displayed this key metric clearly.

DATA INSIGHTS AND ANALYSIS

3. Daily Trend for Total Orders

- A Bar chart was created in Power BI to visualize the daily trends in the total number of orders.
- SQL queries grouped data by date to compute the total number of orders per day.

4. Monthly Trend for Total Orders

- Monthly trends were analyzed using a Line chart in Power BI.
- SQL queries grouped sales data by month and calculated the total orders for each month.

DATA INSIGHTS AND ANALYSIS

5. Percentage of Sales by Pizza Category

- SQL queries calculated the percentage of total revenue contributed by each pizza category.
- A pie chart in Power BI provided a clear representation of the sales distribution among

6. Percentage of Sales by Pizza Size

- The percentage contribution of revenue by each pizza size was calculated using SQL.
- A pie chart in Power BI displayed the results, highlighting the most and least popular sizes.

DATA INSIGHTS AND ANALYSIS

7. Total Pizza Sold by Pizza Category

- A bar chart in Power BI displayed the total quantity of pizzas sold for each category, based on SQL query results.

8. Top 5 Pizzas by Revenue

- SQL queries identified the pizzas with the Highest revenue.
- A bar chart in Power BI showcased the Top 5 performers by revenue.

DATA INSIGHTS AND ANALYSIS

9. Top 5 Pizzas by Total Orders

- SQL queries were used to identify the pizzas with the highest total orders.
- Power BI visualizations presented the top 5 pizzas based on this metric.

10. Top 5 Pizzas by Quantity Sold

- The pizzas with the highest total quantity sold were calculated using SQL.
- A bar chart in Power BI showcased the Top 5 performers by Quantity Sold.

DATA INSIGHTS AND ANALYSIS

11. Bottom 5 Pizzas by Quantity Sold

- SQL queries calculated the pizzas with the lowest quantity sold.
- A bar chart in Power BI showcased the Bottom 5 performers by Quantity Sold.

12. Bottom 5 Pizzas by Total Orders

- SQL queries ranked pizzas by total orders in ascending order to identify the bottom 5.
- A bar chart in Power BI showcased the Bottom 5 performers by Total Order

ANALYSIS USING Power bi

PIZZA SALES ANALYSIS

Pizza Category

01-01-2015 12-02-2148



Home

Best/Worst Seller

Business Day And Time

DAY

Orders are highest on Saturday and Wednesday

MONTHLY

There are maximum order from month of MAY

Sales Performance

CATEGORY

Classic Category Contribute To Maximum Sales And Total Order

Size

Large Pizza Size Contribute To Maximum Sales

Total Revenue

\$817.86K

Average Order Value

38.31

Total Pizza Sold

49574

Total order

21350

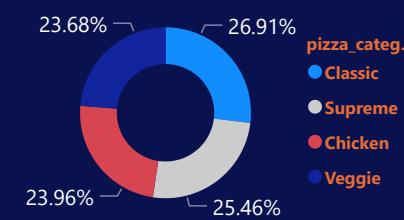
Daily Trend For Total Order



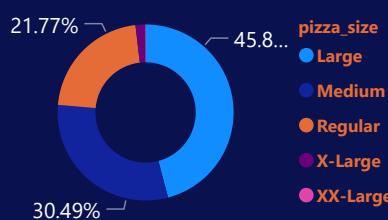
Monthly Trend For Total Order



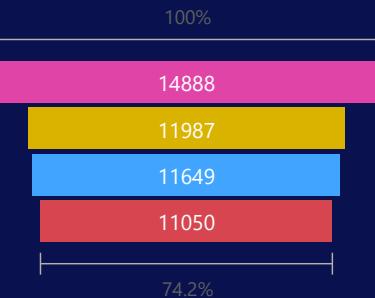
% Of Sales By Pizza Category



% Of Sales By Pizza Size



Total Pizza Sold By Pizza Ctegory



PIZZA SALES ANALYSIS

Pizza Category

All

01-01-2015

12-02-2148

Home

Best/Worst Seller

Best Seller

DAYs

Orders are highest on Saturday and Wednesday

MONTHLY

There are maximum order from month of MAY

worst Seller

CATEGORY

Classic Category Contribute To Maximum Sales And Total Order

Size

Large Pizza Size Contribute To Maximum Sales

Total Revenue

\$817.86K

Average Order Value

38.31

Total Pizza Sold

49574

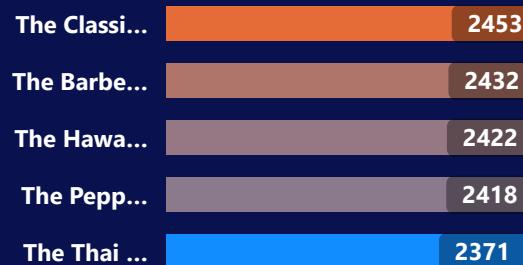
Total order

21350

Top 5 Pizza By Revenue



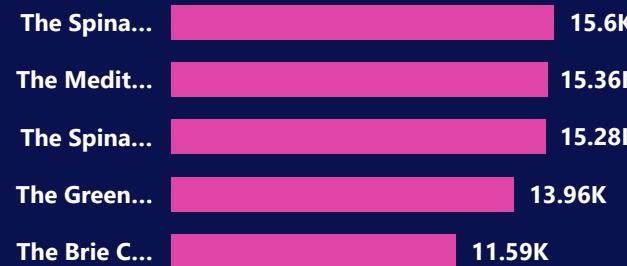
Top 5 Pizza By Quantity



Top 5 Pizza By Total Order



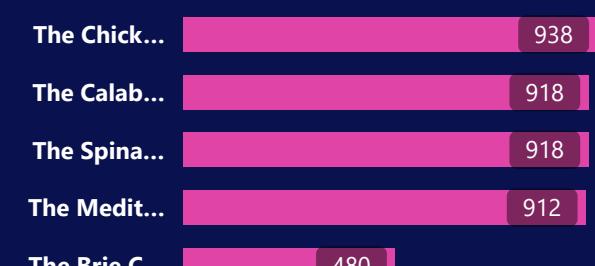
Bottom 5 Pizza By Revenue



Bottom 5 Pizza By Quantity



Bottom 5 Pizza By Order



ANALYSIS USING SQL

TOTAL REVENUE

• **SELECT**

```
CAST(SUM(total_price) AS DECIMAL (10 , 2 )) AS Total_Revenue  
FROM  
pizza_sales_data
```

| Result Grid |

	Total_Revenue
▶	817860.05

AVERAGE ORDER VALUE

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

Result Grid				Filter Rows:
	Avg_order_value			
▶	38.307262295081635			

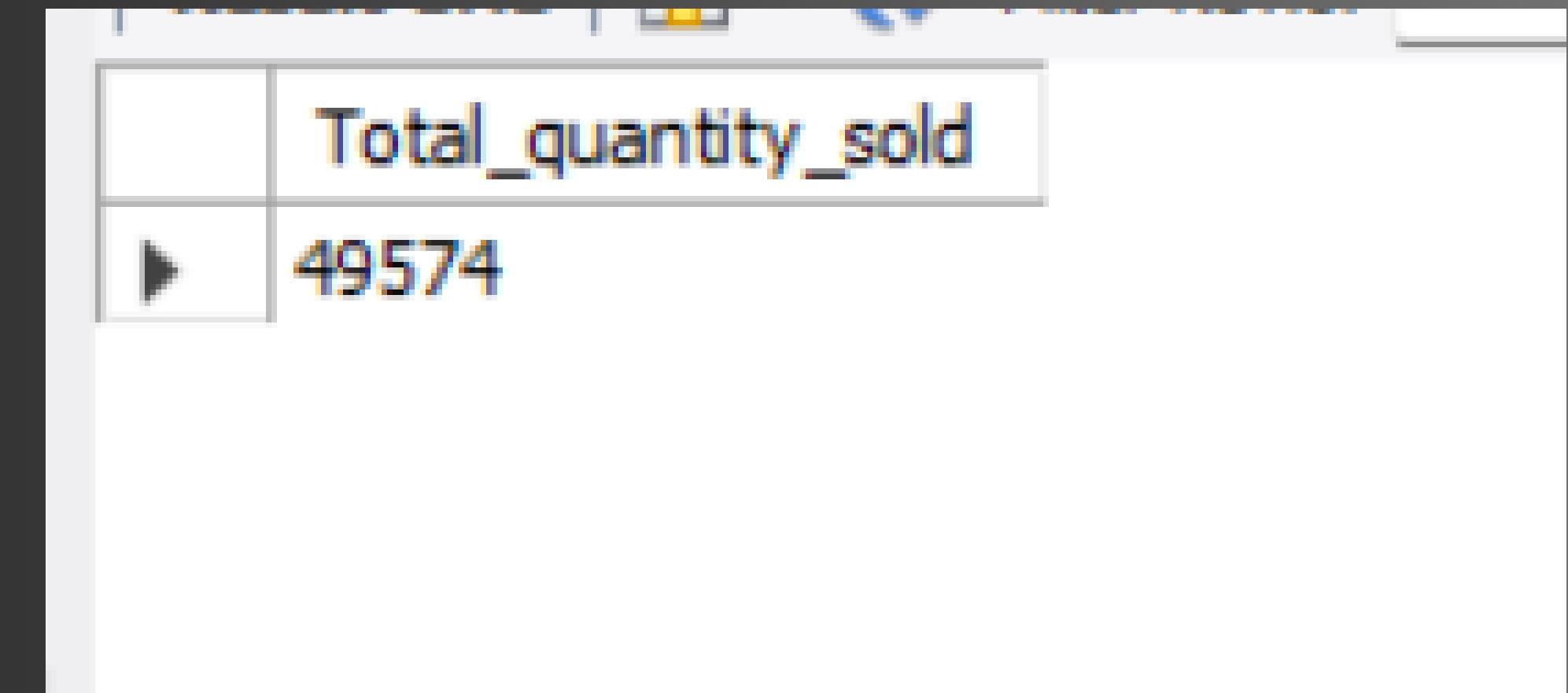
TOTAL PIZZA SOLD

- **SELECT**

```
    SUM(quantity) AS Total_quantity_sold
```

```
FROM
```

```
pizza_sales
```



A screenshot of a MySQL command-line interface window. The title bar shows 'MySQL - Command Line Client'. The main area displays the results of a SQL query:

	Total_quantity_sold
▶	49574

AVG PIZZA PER ORDER

```
SELECT  
    SUM(quantity) / COUNT(DISTINCT order_id) AS Avg_pizza_per_order  
FROM  
    pizza_sales
```

	Avg_pizza_per_order
▶	2.3220

DAILY TREND FOR TOTAL ORDER

```
• SELECT  
    DAYNAME(order_date), COUNT(DISTINCT order_id) AS Daily_Trend  
FROM  
    pizza_sales_data  
WHERE  
    DAYNAME(order_date) IS NOT NULL  
GROUP BY DAYNAME(order_date)
```

	DAYNAME(order_date)	Daily_Trend
•	Friday	6694
	Monday	6704
	Saturday	6707
	Sunday	6706
	Thursday	6702
	Tuesday	6706
	Wednesday	6718

MONTHLY TREND FOR TOTAL ORDER

- **SELECT**

```
MONTHNAME(order_date)as Month, COUNT(DISTINCT order_id) Total_Order
```

```
FROM
```

```
pizza_sales_data
```

```
WHERE
```

```
MONTHNAME(order_date) IS NOT NULL
```

```
GROUP BY MONTHNAME(order_date)
```

Month	Total_Order
April	1808
August	1881
December	1881
February	1698
January	1878
July	1883
June	1883
March	1880
May	1917
November	1851
October	1854
September	1830

% OF SALES BY PIZZA CSTEORY

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

pizza_category	total_rev	PCT
Classic	220053.10	26.905960255669903
Veggie	193690.45	23.682590927384783
Supreme	208197.00	25.45631126009884
Chicken	195919.50	23.955137556847493

% OF SALES BY PIZZA SIZE

```
SELECT
    pizza_size,
    ROUND(SUM(total_price), 2) AS Revenue,
    (SUM(total_price) / (SELECT
        SUM(total_price)
    FROM
        pizza_sales_data)) * 100 AS PCT
FROM
    pizza_sales_data
GROUP BY pizza_size
```

pizza_size	Revenue	PCT
M	249382.25	30.492044451859723
L	375318.7	45.890332948774294
S	178076.5	21.773468455880682
XL	14076	1.7210768517181052
XXL	1006.6	0.12307729176892906

TOTAL PIZZA SOLD BY PIZZA CATEGORY

```
SELECT  
    pizza_category, SUM(quantity) AS Total_Pizza_Sold  
FROM  
    pizza_sales_data  
GROUP BY pizza_category  
ORDER BY Total_Pizza_Sold DESC
```

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

TOP 5 PIZZA BY REVENUE

```
SELECT  
    pizza_name, SUM(total_price) AS Total_Revenue  
FROM  
    pizza_sales_data  
GROUP BY pizza_name  
ORDER BY SUM(total_price) 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

TOP 5 PIZZA BY TOTAL ORDER

```
SELECT  
    pizza_name, COUNT(DISTINCT order_id) AS Total_order  
FROM  
    pizza_sales_data  
GROUP BY pizza_name  
ORDER BY COUNT(DISTINCT order_id) DESC  
LIMIT 5
```

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

TOP 5 PIZZA BY QUANTITY

```
SELECT  
    pizza_name, SUM(quantity) AS Total_quantity_sold  
FROM  
    pizza_sales_data  
GROUP BY pizza_name  
ORDER BY SUM(quantity) DESC  
LIMIT 5
```

pizza_name	Total_quantity_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 PIZZZA BY QUANTITY

```
SELECT  
    pizza_name, SUM(quantity) AS quantity_sold  
FROM  
    pizza_sales_data  
GROUP BY pizza_name  
ORDER BY SUM(quantity) ASC  
LIMIT 5
```

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

BOTTOM 5 PIZZA BY REVENUE

```
SELECT
    pizza_name,
    CAST(SUM(total_price) AS DECIMAL (10 , 2 )) AS Revenue
FROM
    pizza_sales_data
GROUP BY pizza_name
ORDER BY SUM(total_price) ASC
LIMIT 5
```

pizza_name	Revenue
The Brie Carre Pizza	11588.50
The Green Garden Pizza	13955.75
The Spinach Supreme Pizza	15277.75
The Mediterranean Pizza	15360.50
The Spinach Pesto Pizza	15596.00

BOTTOM 5 PIZZA BY TOTAL ORDER

```
SELECT  
    pizza_name, COUNT(DISTINCT order_id) AS Total_order  
FROM  
    pizza_sales_data  
GROUP BY pizza_name  
ORDER BY COUNT(DISTINCT order_id) ASC  
LIMIT 5
```

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

Conclusion

The project successfully analyzed pizza sales data, providing actionable insights into revenue trends, sales performance by category and size, and top/bottom-performing pizzas. The visualizations and metrics generated can be used by business stakeholders to make strategic decisions, such as:

- Focusing on high-performing pizza categories and sizes
- Optimizing the menu by addressing the performance of bottom-performing pizzas.
- Leveraging daily and monthly sales trends for targeted marketing campaigns.

THANK YOU!

