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PIZZA SALES ANALYSIS PORTFOLIO PROJECT

WELCOME TO

INTRODUCTION

IN THIS PROJECT, WE ANALYZE PIZZA SALES DATA TO DERIVE KEY INSIGHTS AND TRENDS. THE ANALYSIS COVERS VARIOUS ASPECTS SUCH AS ORDER PATTERNS, REVENUE GENERATION, AND DEMAND FOR DIFFERENT PIZZA TYPES. THIS HELPS IN UNDERSTANDING CUSTOMER PREFERENCES AND BUSINESS PERFORMANCE.

KEY INSIGHTS & FINDINGS

1.TOTAL REVENUE FROM PIZZA SALES

- THE TOTAL REVENUE GENERATED FROM PIZZA SALES IS CALCULATED.
- HELPS IN EVALUATING BUSINESS PERFORMANCE AND FINANCIAL HEALTH.
- CAN BE USED FOR REVENUE FORECASTING AND FUTURE SALES STRATEGY.

2. MOST COMMON PIZZA SIZE ORDERED
THE MOST FREQUENTLY ORDERED PIZZA SIZE IS IDENTIFIED USING SQL QUERIES.
THIS INSIGHT HELPS IN MANAGING INVENTORY AND OPTIMIZING PRODUCTION.

3. TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED
THE NUMBER OF PIZZAS ORDERED PER CATEGORY IS CALCULATED TO DETERMINE POPULAR CATEGORIES.
CATEGORIES INCLUDE VEG, NON-VEG, CLASSIC, ETC.

4. CATEGORY-WISE DISTRIBUTION OF PIZZAS
THIS ANALYSIS HIGHLIGHTS THE DISTRIBUTION OF DIFFERENT PIZZA CATEGORIES IN THE DATASET.
IT HELPS IN IDENTIFYING CUSTOMER PREFERENCES FOR SPECIFIC TYPES.

KEY INSIGHTS & FINDINGS

4. TOP 3 MOST ORDERED PIZZA TYPES (REVENUE-BASED)
USING SQL, THE HIGHEST REVENUE-GENERATING PIZZAS ARE IDENTIFIED.
THIS ASSISTS IN PROMOTIONAL STRATEGIES AND PRICING DECISIONS.

5. CUMULATIVE REVENUE OVER TIME
DAILY REVENUE AND CUMULATIVE REVENUE TRENDS ARE CALCULATED.
THIS HELPS IN UNDERSTANDING REVENUE GROWTH PATTERNS.

6. AVERAGE ORDER VALUE (AOV)
AOV IS COMPUTED TO UNDERSTAND THE SPENDING PATTERN PER ORDER.
THIS INSIGHT HELPS IN SETTING PRICING STRATEGIES AND DISCOUNTS.

7. LEAST ORDERED PIZZAS (LOW DEMAND ITEMS)
IDENTIFIES PIZZAS WITH THE LEAST DEMAND.
USEFUL FOR OPTIMIZING THE MENU BY REMOVING OR PROMOTING LOW-PERFORMING ITEMS.

```sql
-- Calculate the total revenue generated from pizza sales
SELECT
    SUM(order_details.quantity * pizzas.price) AS Total_Revenue
FROM
    order_details
        JOIN
    pizzas ON order_details.pizza_id = pizzas.pizza_id;
```

Total_Revenue
303

```sql
-- Identify the most common pizza size ordered
SELECT
    size, COUNT(*) AS Order_Count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY size
ORDER BY Order_Count DESC
LIMIT 1;
```

size	Order_Count
L	25

```sql
-- Total quantity of each pizza category ordered
SELECT category, SUM(quantity) AS Total_Quantity
FROM order_details
JOIN pizzas ON order_details.pizza_id = pizzas.pizza_id
JOIN pizza_types ON pizzas.pizza_type_id = pizza_types.pizza_type_id
GROUP BY category
ORDER BY Total_Quantity DESC;
```

category	Total_Quantity
Veggie	26
Supreme	6

```sql
-- Category-wise distribution of pizzas
SELECT category, COUNT(*) AS Total_Pizzas
FROM pizzas
JOIN pizza_types ON pizzas.pizza_type_id = pizza_types.pizza_type_id
GROUP BY category
ORDER BY Total_Pizzas DESC;
```

category	Total_Pizzas
Veggie	10
Supreme	5

```sql
-- Determine the top 3 most ordered pizza types based on revenue
SELECT pt.category, pt.name AS pizza_type, SUM(od.quantity * p.price)
FROM order_details od
JOIN pizzas p ON od.pizza_id = p.pizza_id
JOIN pizza_types pt ON p.pizza_type_id = pt.pizza_type_id
GROUP BY pt.category, pt.name
ORDER BY pt.category, revenue DESC
LIMIT 3;
```

pizza_type	revenue
The Sicilian Pizza	6
The Five Cheese Pizza	23
The Mexicana Pizza	2

```sql
--  Cumulative Revenue Over Time
SELECT o.date,
       SUM(od.quantity * p.price) AS daily_revenue,
       SUM(SUM(od.quantity * p.price)) OVER (ORDER BY o.date) AS cumulative_revenue
FROM orders o
JOIN order_details od ON o.order_id = od.order_id
JOIN pizzas p ON od.pizza_id = p.pizza_id
GROUP BY o.date
ORDER BY o.date;
```

date	daily_revenue	cumulative_revenue
1/1/2015	28	28
1/2/2015	29	57
1/3/2015	26	83
1/4/2015	27	110
1/5/2015	2	112

```sql
-- Average Order Value (AOV)
SELECT AVG(order_value) AS avg_order_value
FROM (
    SELECT o.order_id, SUM(od.quantity * p.price) AS order_value
    FROM orders o
    JOIN order_details od ON o.order_id = od.order_id
    JOIN pizzas p ON od.pizza_id = p.pizza_id
    GROUP BY o.order_id
) AS subquery;
```

avg_order_value
1.5342465753424657

```sql
-- Least Ordered Pizzas (Low Demand Items)
SELECT pt.name AS pizza_type, SUM(od.quantity) AS total_quantity
FROM order_details od
JOIN pizzas p ON od.pizza_id = p.pizza_id
JOIN pizza_types pt ON p.pizza_type_id = pt.pizza_type_id
GROUP BY pt.name
ORDER BY total_quantity ASC
LIMIT 5;
```

pizza_type	total_quantity
The Mediterranean Pizza	1
The Mexicana Pizza	2
The Sicilian Pizza	6
The Five Cheese Pizza	23

BUSINESS RECOMMENDATIONS:

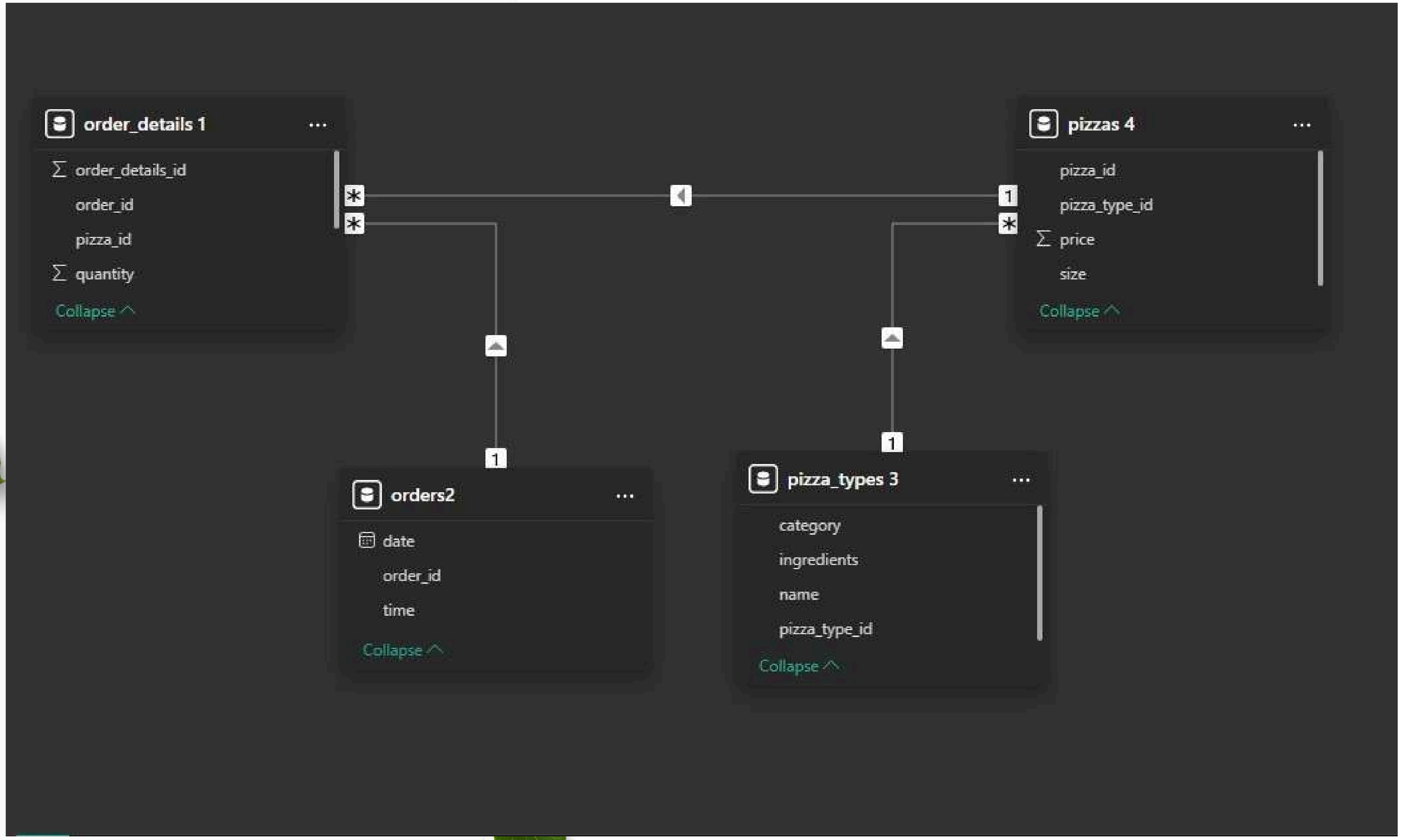
OPTIMIZE INVENTORY BASED ON HIGH-DEMAND PIZZA SIZES AND CATEGORIES.

FOCUS MARKETING EFFORTS ON HIGH-REVENUE PIZZAS TO BOOST SALES.

CONSIDER DISCOUNTS OR SPECIAL OFFERS ON LOW-DEMAND PIZZAS TO INCREASE THEIR SALES.

USE REVENUE TRENDS FOR SALES FORECASTING AND RESOURCE ALLOCATION.

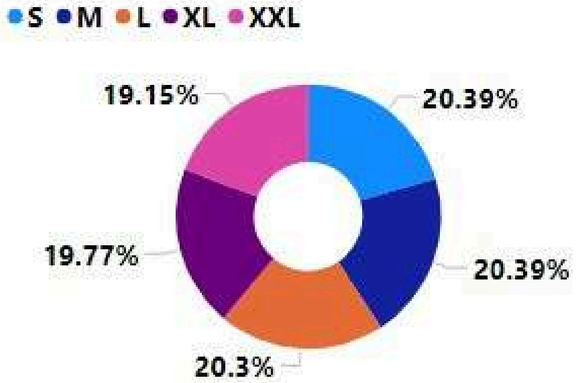
POWER BI DASHBOARD


order_details 1
order_details_id
order_id
pizza_id
quantity
Collapse
pizzas 4
pizza_id
pizza_type_id
price
size
Collapse
orders2
date
order_id
time
Collapse
pizza_types 3
category
ingredients
name
pizza_type_id
Collapse
*
*
1
*
1
1

Pizza Revenue & Order Trends

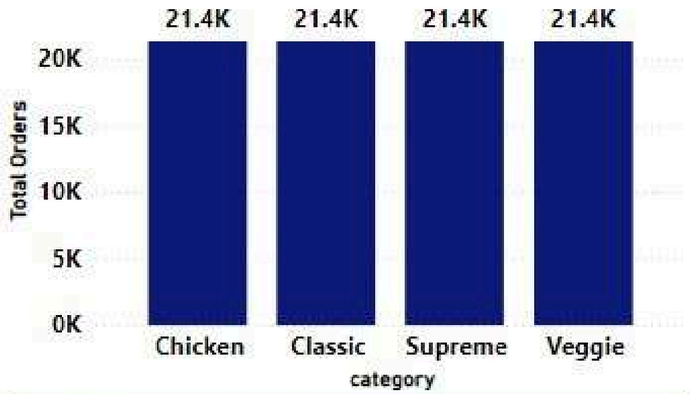
32	21K	48.62K	38.31	817.86K
Total Pizza Type	Total Orders	Quantity	Average Order Value	Total Revenue

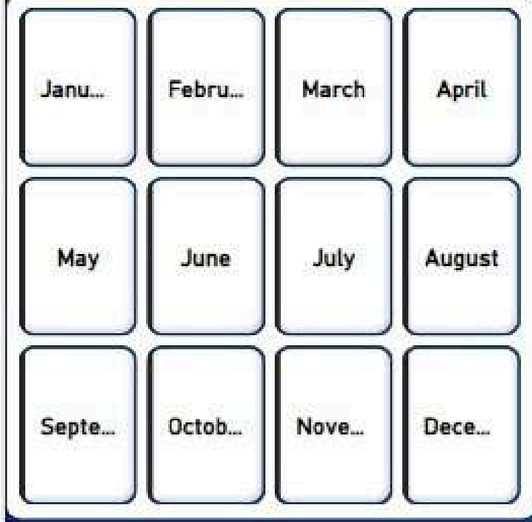
Average_of_Order_id by Size



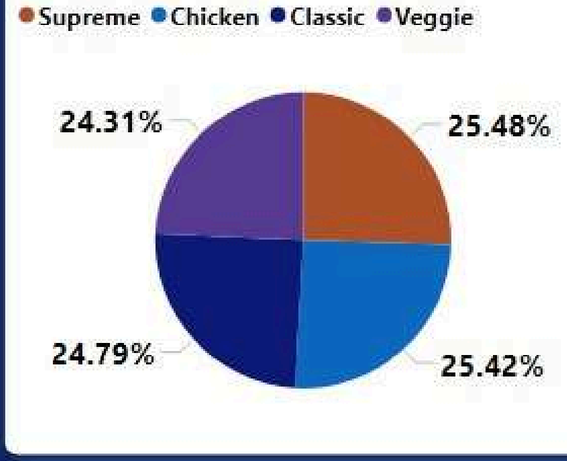
Average Order Value and Total_Price by size

Total Orders by category

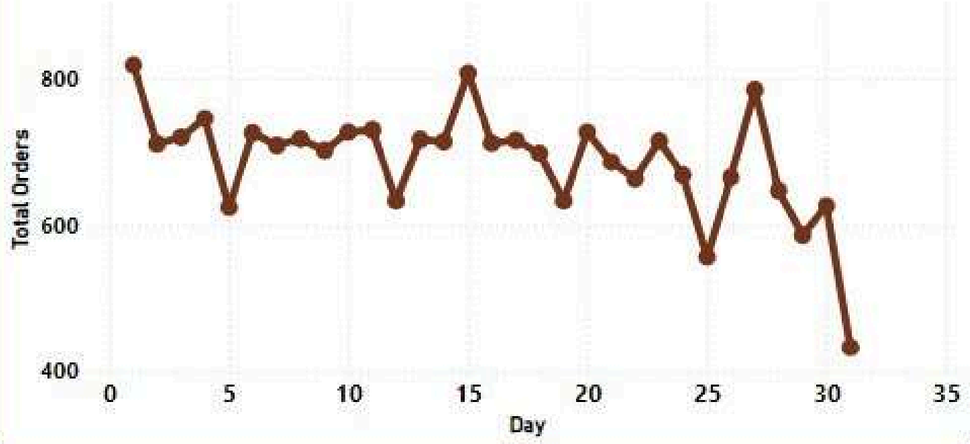




Rate Of Price by category



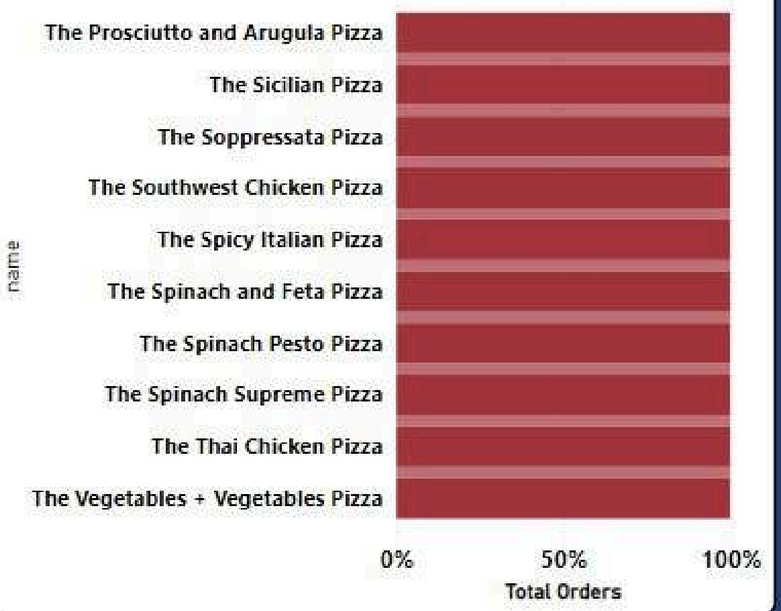
Total Orders by Day



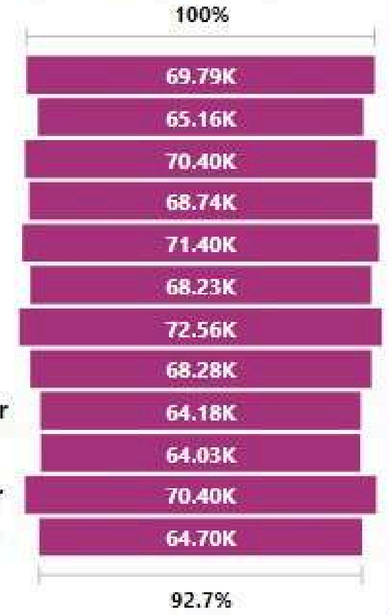
Pizza Revenue & Order Trends

Chicken	L	21350
Pizza_Category	Pizza_Size	Total Orders
Chicken	M	21350
Pizza_Category	Pizza_Size	Total Orders
Chicken	S	21350
Pizza_Category	Pizza_Size	Total Orders
Chicken	XL	21350
Pizza_Category	Pizza_Size	Total Orders
Chicken	XXL	21350
Pizza_Category	Pizza_Size	Total Orders
Classic	L	21350
Pizza_Category	Pizza_Size	Total Orders
Classic	M	21350
Pizza_Category	Pizza_Size	Total Orders
Classic	S	21350
Pizza_Category	Pizza_Size	Total Orders
Classic	XL	21350
Pizza_Category	Pizza_Size	Total Orders
Classic	XXL	21350
Pizza_Category	Pizza_Size	Total Orders
Supreme	L	21350
Pizza_Category	Pizza_Size	Total Orders
Supreme	M	21350
Pizza_Category	Pizza_Size	Total Orders
Supreme	S	21350
Pizza_Category	Pizza_Size	Total Orders
Supreme	XL	21350
Pizza_Category	Pizza_Size	Total Orders

Total Orders by Pizza_Name



Total Revenue by Month



name	category	Month	Quantity	Sum of price	Total Revenue	Total Orders	Average Order Value
The Thai Chicken Pizza	Chicken	July	2	50.25	4,073.75	1935	2.11
The Barbecue Chicken Pizza	Chicken	March	2	50.25	4,049.25	1840	2.20
The California Chicken Pizza	Chicken	August	2	50.25	3,977.25	1841	2.16
The Barbecue Chicken Pizza	Chicken	May	2	50.25	3,953.50	1853	2.13
The Barbecue Chicken Pizza	Chicken	November	3	50.25	3,881.75	1792	2.17
The California Chicken Pizza	Chicken	June	2	50.25	3,870.50	1773	2.18
The Thai Chicken Pizza	Chicken	March	2	50.25	3,843.75	1840	2.09
The Thai Chicken Pizza	Chicken	December	2	50.25	3,813.00	1680	2.27
The Barbecue Chicken Pizza	Chicken	April	2	50.25	3,788.50	1799	2.11
The Barbecue Chicken Pizza	Chicken	July	2	50.25	3,784.25	1935	1.96
The Thai Chicken Pizza	Chicken	November	2	50.25	3,776.00	1792	2.11
The Barbecue Chicken Pizza	Chicken	January	3	50.25	3,770.25	1845	2.04
The Thai Chicken Pizza	Chicken	September	2	50.25	3,736.25	1661	2.25
Total			**4**	**1,578.30**	**817,860.05**	**21350**	**38.31**

DATABASE MODEL

THE DATABASE CONSISTS OF FOUR TABLES: ORDER_DETAILS, ORDERS, PIZZAS, AND PIZZA_TYPES.

THE ORDER_DETAILS TABLE CONNECTS ORDERS WITH PIZZAS, WHILE PIZZAS IS LINKED TO PIZZA_TYPES.

THIS STRUCTURE HELPS ANALYZE PIZZA SALES, ORDER TRENDS, AND CUSTOMER PREFERENCES.

POWER BI DASHBOARD INSIGHTS

DASHBOARD 1:

TOTAL PIZZA TYPES: 32

TOTAL ORDERS: 21K

TOTAL SALES REVENUE: $817.86K

ORDER DISTRIBUTION BY SIZE & CATEGORY: PROVIDES INSIGHTS INTO CUSTOMER PREFERENCES.

SALES TREND OVER TIME: HELPS TRACK PERFORMANCE AND PEAK SALES PERIODS.

DASHBOARD 2:

TOP-SELLING PIZZAS: SHOWS THE MOST POPULAR PIZZAS BY TOTAL ORDERS.

MONTHLY REVENUE TREND: VISUALIZES SALES PERFORMANCE ACROSS DIFFERENT MONTHS.

CATEGORY & SIZE ANALYSIS: HELPS UNDERSTAND WHICH PIZZA SIZES AND CATEGORIES ARE PREFERRED

THANK YOU!