

PIZZA SALES PERFORMANCE ANALYSIS

(By Aishwarya S)

1.INTRODUCTION:-

This project focuses on analysing retail pizza sales data to understand overall business performance, customer preferences, and revenue trends. The dataset contains key transactional information such as order dates, pizza categories, quantities sold, prices, and total sales amounts.

2.OBJECTIVE:-

Evaluate overall sales performance through revenue and order metrics.

- Identify top and low performing pizza items.
- Provide insights to improve decision-making in pricing, marketing, and inventory planning.
- Generate an analytical summary report for business use.

3.DATASET OVERVIEW:-

The dataset includes 48,000+ pizza sales entries, covering various pizza types, sizes, categories, and ingredients. The dataset contains the following fields:

pizza_id -Unique identifier for each pizza record in the dataset.

Order_id-Unique ID representing each customer order. Multiple pizzas may belong to one order.

pizza_name_id- Abbreviated internal pizza name used for categorization.

quantity -Number of units of a particular pizza sold in that order line.

order_date -Date when the order was placed.

order_time -Time of the order, allowing peak-hour analysis.

unit_price -Price of a single pizza unit before quantity multiplication.

total_price -Total price ($\text{unit_price} \times \text{quantity}$).

pizza_size -Size of the pizza (S, M, L, XL, XXL).

pizza_category -Category such as Classic, Supreme, Veggie, or Chicken.

Pizza_ingredients-List of toppings/ingredients for each pizza

Pizza_name-Full description name of the pizza.

4.DATACLEANING(STEP 1):-

- Confirmed that the dataset **contains 0 missing values**.
- Converted **order_date** into proper **datetime format**.
- Verified data types for all columns(numeric,text,date)
- Removed duplicates and Created time based columns.

5.DESCRIPTIVE STATISTICS(STEP 2):-

Calculating the following fields:

- $\text{TOTAL_REVENUE} = \text{SUM}(\text{pizza_name}[\text{total_price}])$
- $\text{AVERAGE Weekly_Units Sold for Product A and Product B}$

Product A-The Classic Deluxe Pizza

Product B-The Five Cheese Pizza

Average_Weekly_Units sold per week=AVERAGE(Pizza_name[units_sold])Discount

- Highest sales Overall=SUM(Weekly_sales[total_price])

6.DATAVISUALIZATION(STEP 3):-

Sales Performance Analysis:-

- Line Chart-Weekly Units sold for each product.
- Bar Chart-Total Revenue per product
- Scatter Plot-Marketing Spend Vs Units Sold

7.DATA ANALYSIS(STEP 4):-

7a.Marketingspend Vs Units Sold

This analysis explores how the amount invested in marketing impacts the number of units sold. The objective is to evaluate whether higher marketing spending drives stronger sales and to quantify the strength of the relationship. A positive correlation indicates that as marketing spend increases, units sold also increase.

CONCLUSION:-

Optimize Budget Allocation and boost product sales in the market.

7b.Highest Growth Product Across Weeks:-

The goal of this analysis is to identify which product (pizza) shows the highest growth in units sold across the weeks of the year. Growth is measured as:

Growth = Units Sold in Final Week – Units Sold in First Week

Among the different pizzas, The California Chicken Pizza shows the most consistent and strongest growth.

7c.KEY OVERALL SALES INSIGHTS:-

- ✓ Your top revenue drivers are Chicken-based pizzas.
- ✓ Classic Deluxe Pizza performs strongly across both revenue and units sold.
- ✓ Large size pizzas dominate sales → customers prefer larger portions.
- ✓ Week 48 shows peak demand → consider holiday promotions.
- ✓ Growing pizzas should be prioritized in marketing and visibility.
- ✓ XXL pizzas almost never sell → consider removal or rebranding.

8.FINAL CONCLUSION:-

- ❖ The Pizza Sales Performance Analysis reveals strong overall sales activity, stable weekly demand and clear customer preferences across products, categories, and sizes. With over \$817K in revenue and more than 49,000 pizzas sold, the business demonstrates consistent customer engagement.
- ❖ Chicken-based pizzas drive the highest revenue, while Classic pizzas lead in total units sold.
- ❖ Large sizes are the most popular, and Week 48 shows the highest demand, likely due to seasonal factors.
- ❖ The Soppressata Pizza displays the strongest growth over time, indicating potential for strategic promotion.
- ❖ The business can enhance performance further by focusing on high performing flavours, strengthening marketing around high-demand weeks, and reconsidering low-demand items such as XXL pizzas.

Overall, the business maintains solid sales health with opportunities to optimize inventory, marketing and product strategy for even greater performance.

