Pizza Sales Analysis

Introduction

In this report, I delve into the pizza sales, aiming to uncover valuable insights to drive business growth and make data-driven decisions. My journey takes me from exploring the data to analyzing sales trends and product performance.

Problem Statement

The pizza business has been thriving, but to sustain and enhance our growth, I need a deeper understanding of our sales data.

Project Objectives:

Identify peak business periods: This involves analyzing order data to determine the busiest days and times, allowing us to target promotions and allocate resources effectively.

Optimize inventory management: Analyzing popular and unpopular pizzas will inform inventory decisions, minimizing waste and ensuring sufficient stock for in-demand items.

Understand customer spending behavior: Average order value will provide insights into customer spending patterns, aiding in menu development and pricing strategies.

Analysis Tools:

Power BI: A powerful data visualization tool used to create insightful dashboards and reports, facilitating data exploration and discovery.

Excel: Used for data cleaning, manipulation, and preliminary analysis.

Data Sources:

Order details: Provides detailed information on individual orders, including date, time, pizzas, quantity, price, and ingredients.

Orders: Contains daily total order count.

Pizza categories: Lists available pizza categories.

Pizzas: Provides details of each pizza ID, pizza quantity, size and ingredients.

Data Exploration

To kickstart my analysis, I first take a look at the dataset. It provides information about pizza orders, including the total price, quantity sold, order date, pizza name, size, and category.

-Total Revenue: *I calculate the total revenue, which gives me an overview of my earnings.*
- Total Pizza Sold: *This metric tells me the total number of pizzas I have sold.*
- Total Orders: *It provides the count of distinct orders, giving me an idea of my order volume.*

- Average Order: *The average order amount helps me understand the spending patterns of our customers.*

- Average Pizza per Order: *The average pizza per order amount helps me understand the spending patterns of our customers.*

Results

The following are some of the key findings from the analysis:

- The total number of pizza orders was approximately **21,000**
- The total sales of pizza were approximately **50,000**
- The total revenue from pizza sales was **$817,860.05**
- The average order value was approximately **$38**
- The average pizza per order value was approximately **2**

Sales Analysis Processes

1. Top and Bottom Performers: I identify the top and bottom 5 pizza names by the number of orders. This helps me understand customer preferences.

2. Top and Bottom Performers by Revenue: I identify the top and bottom 5 pizza names by total Revenue Earn. This reveals which pizzas are most and least popular.

Key Findings

The following are some of the key findings from the data analysis:

The top 5 pizzas by order were:

- The Classic Deluxe Pizza
- The Hawaiian Pizza
- The Pepperoni Pizza
- The Barbecue Chicken Pizza
- The Thai Chicken Pizza

The bottom 5 pizzas by order were:

- The Brie Carre Pizza
- The Mediterranean Pizza
- The Spinach Supreme Pizza
- The Calabrese Pizza
- The Chicken Pesto Pizza

The top 5 pizzas by Revenue were:

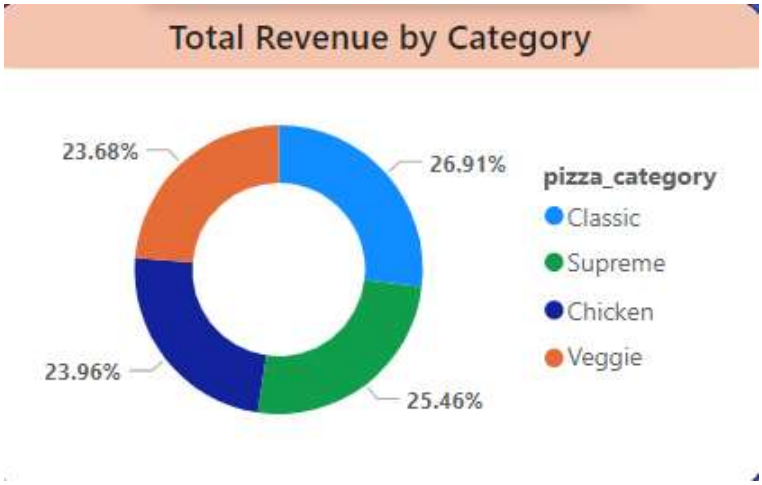
- The Thai Chicken Pizza
- The Barbecue Chicken Pizza
- The California Chicken Pizza
- The Classic Deluxe Pizza
- The Spicy Italian Pizza

The bottom 5 pizzas by Revenue were:

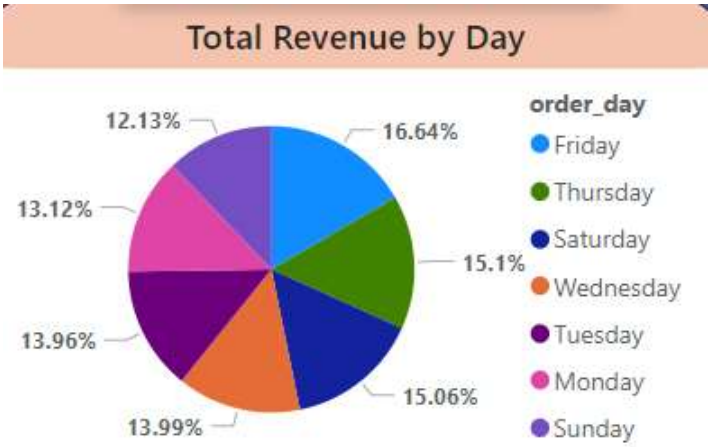
- The Brie Carre Pizza
- The Green Garden Pizza
- The Spinach Supreme Pizza
- The Mediterranean Pizza
- The Spinach Pesto Pizza

Revenues Analysis Processes

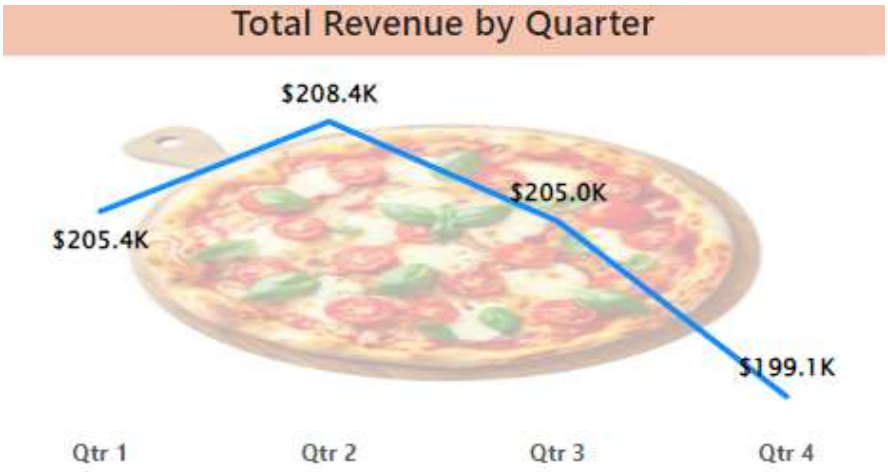
- **The total revenues by pizza category**



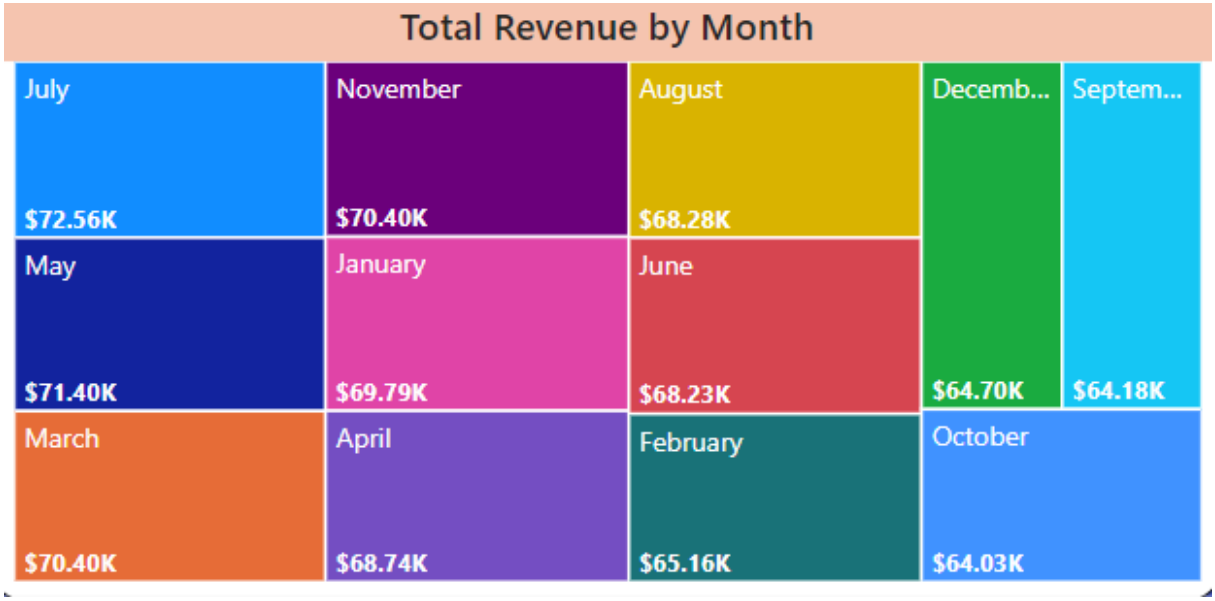
- **The total revenues by day**



- **The total revenues by pizza quarter**



- **The total revenues by month**



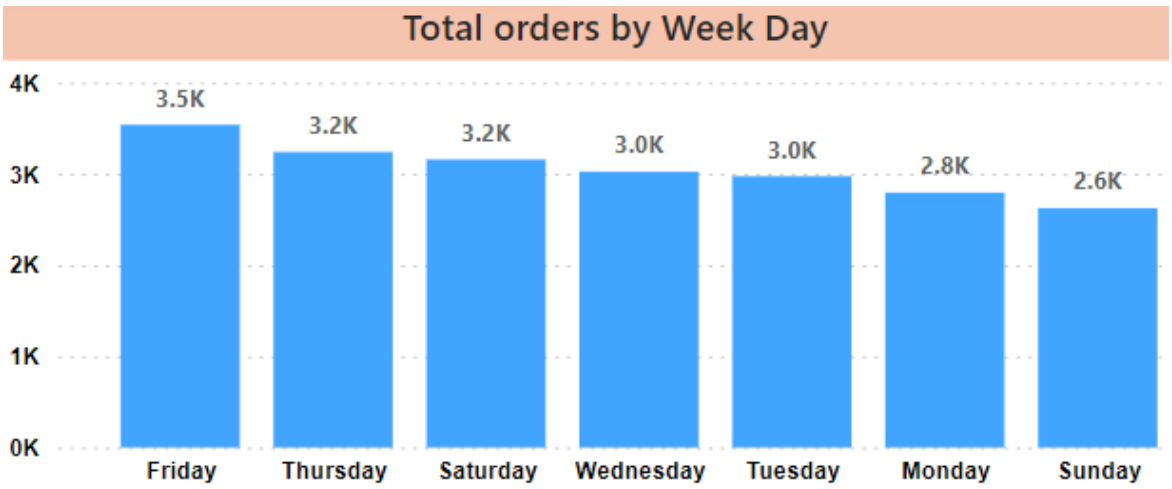
Time-Series Analysis Processes

- **The total orders by month**

- **The total orders by quarter**

- **The total orders by day**

- **The total orders by week day**



Recommendations

1. The total revenue for the specified period is **$817,860.05**. To sustain growth, I should focus on maintaining or increasing this figure.
2. They have sold a total of **50,000.** pizzas. This data can guide inventory and production planning.
3. The average order amount is **$38**, indicating the customers' spending habits. This could inform pricing and promotions.
4. **The Classic Deluxe Pizza** are customer favorites, and they should consider marketing them more prominently.
5. **The Classic Deluxe Pizza** are top performers in terms of quantity, showing strong demand.
6. **Large Size** and **Classic** dominate sales, suggesting they should prioritize these sizes and categories.

7. Sales show a noticeable Trend by Day (**Friday**) and Trend by Month **(July**), which could help with staffing and marketing efforts.

8. Percentage Sales by Pizza Category and Percentage Sales by Pizza Size provide insights into the contribution of different products.

Benefits:

- Increased revenue and profitability
- Improved customer satisfaction
- Enhanced operational efficiency
- Data-driven decision-making

This project's findings will be instrumental in driving strategic improvements across the pizza store's operations, ultimately leading to increased revenue, profitability, and customer satisfaction.