

## **Pizza Sales Report Analysis**

### **Problem & background**

**Problem:** - Pizza restaurant has recently seen a decline in sales and plans to increase them by looking at customer and order data. To do this, the management plans to perform a thorough analysis of order data and consumer behaviour in order to spot important trends and areas for improvement.

**Background:** - An overview of pizza sales data from January 2015 to December 2015 is given in this report. To find trends and patterns in pizza sales, data was gathered from pizza joints across the United States and analysed.

### **Solution**

In response to declining sales, we propose an integrated solution that combines data analysis, data-driven insights, and stakeholder engagement.

### **Data Analysis**

- Conducted an in-depth analysis of pizza sales data to identify critical patterns and opportunities for improvement.
- Leverage Excel to create data tables that can be used to store and analyse sales data.
- Utilize Excel to create dynamic dashboards that can be used to visualize sales data and identify trends.

### **Data Driven Insights**

- Using the insights gained from data analysis to identify the factors that are driving declining pizza sales.
- Develop targeted strategies to address the identified factors.
- For example, if data analysis reveals that sales are declining on weekdays, the pizzeria could offer discounts or promotions on weekdays to encourage more orders.
- If data analysis reveals that customers are unhappy with the quality of the ingredients, the pizzeria could take steps to improve the quality of the ingredients or the cooking process.

### **Stakeholder Engagement**

- Engage staff and management in the process of gathering and analysing sales data.
- Gather feedback from staff on their observations of customer behaviour.
- Cross-match feedback from staff with data analysis to uncover hidden correlations.
- Develop dashboard or app features that can be used to track sales performance and identify areas for improvement.
- Analyse customer reviews to identify common complaints and areas for improvement.

## Project scope

### Product

- Analyse customer preferences to identify the most popular pizza toppings and combinations.
- Determine which pizza sizes are most in demand.
- Explore the possibility of offering new or limited-edition pizza products.

### Price

- Analyse competitor pricing to ensure that your pizza prices are competitive.
- Consider offering discounts or promotions to attract new customers and encourage repeat business.
- Implement a dynamic pricing strategy to adjust prices based on demand and other factors.
- Offer value-added options, such as combo meals or sides, to increase the average order value.

### Promotion

- Develop a targeted marketing campaign to reach your target audience.
- Use social media, email marketing, and other digital channels to promote your pizza restaurant.
- Partner with local businesses to offer cross-promotional opportunities.
- Run contests and giveaways to generate excitement and engagement.

### Place

- Make sure your pizza restaurant is conveniently located and easy to access.

- Offer online ordering and delivery to make it even easier for customers to purchase your pizzas.
- Consider expanding your distribution network to sell your pizzas in grocery stores or other retail outlets.
- Create a welcoming and inviting atmosphere in your pizza restaurant.

### People

- Train your staff to provide excellent customer service.
- Develop a loyalty program to reward repeat customers.
- Offer employee training and development opportunities to create a more positive and productive workplace culture.
- Conduct customer surveys to gather feedback and identify areas for improvement.

### Methodology

Data Resources: - The pizza shop provides the data source, which consists of tables with data in an Excel format.

Data wrangling: - Identifying the data, formatting the data, looking for outliers, and checking for null or blank cells. Data from four different tables must be combined into one Excel spreadsheet and formatted appropriately.

Data Analysis: - The dataset will next be analysed for flow patterns, correlations between variables, and further insights. In order to simplify additional data analysis, we will create new Excel worksheets within the same file utilising pivot tables and a variety of Excel functions. We will use pivot charts to produce an easily understood visual representation of the advised analysis. These graphs will provide information about daily customers, volume and the typical quantity of pizzas ordered.

Data Visualization: - In the end, we'll produce a dashboard that provides all the suggested analysis in a simple to understand manner. The dashboard will give users a thorough overview of the data and allow them to base their judgements on the analysis's key findings.

### Goals & KPI's

#### Goals

- Increase pizza sales by 10% within 6 months
- Identify and address the root cause of the decline in sales
- Improve customer satisfaction and loyalty
- Gain a deeper understanding of customer behaviour and preferences

### Key Performance Indicators (KPIs)

- Total revenue
  - ✓ \$ 801944.7
- Average order value
  - ✓ \$ 37.56
- Total pizza sold
  - ✓ 49574
- Total orders placed
  - ✓ 21350
- Average pizzas per order (quantity of pizza in an order)
  - ✓ 2.27 ~ 2.00

### Technical Processes

Formula used: - Count, Average, Pivot table, VLOOKUP, Max, Min, Charts, Graphs, filter etc.

Tools used: - Excel for Cleaning, merging and joining, analyzing, Data visualizations.

### Business Concepts Used

#### Market Understanding

- Identify the target market for the pizza restaurant and analyse their needs and preferences.
- Segment the market into different customer groups and develop targeted marketing campaigns for each group.

#### Customer Demographic

- Analyze the customer demographic data (e.g., age, gender, location, income) to better understand the customer base.
- Use this information to develop marketing campaigns and product offerings that are tailored to the specific needs of different customer groups.

#### Customer Behaviour

- Analyse customer behaviour data (e.g., order history, website traffic, social media engagement) to identify trends and patterns.
- Use this information to improve the customer experience, develop new products and services, and target marketing campaigns more effectively.

### Customer Retention:

- Implement strategies to retain existing customers and encourage repeat business.
- This may include offering loyalty programs, discounts, and other incentives.

### New Customer Acquisition:

- Develop strategies to attract new customers and grow the customer base.
- This may include marketing campaigns, public relations initiatives and partnerships with other business.

### Recommended Analysis

- How many customers do we have each day? Are there any peak hours.
  - We see 60 customers a day on average, and yes, there are two peak hours: from 12 to 1 and from 5 to 6 p.m., when most of the orders are placed.
- How many pizzas are typically in order? Do we have any bestsellers?
  - Average no. of pizza in an order is 2 and the best seller pizza is big\_meat\_s
- How much money did we make this year? Can we identify any seasonality in the sales?
  - This year we made \$ 801,944.70 & Summer & Spring is the highest selling season.
- Are there any pizzas we should take off the menu, or any promotions we could leverage.
  - We can take off the pizza from the menu is The Brie Carre Pizza pizza reason is simple it is lowest ordered pizza in that year. Since the summer season already saw the largest pizza sales and the Fall season saw the lowest pizza sales, so, we can provide a seasonal discount or special offers according to season.

#### Other's Insights

- Classic Category contributes to maximum Sales, Total Orders & Total Pizza Sold
- Large Pizza Size contributes to maximum Total Sales
- The Thai Chicken Pizza Contributes to maximum Revenue
- The Classic Deluxe Pizza Contributes to maximum Total Quantities

- The Classic Deluxe Pizza Contributes to maximum Total Orders
- The Brie Carre Pizza Contributes to minimum Revenue
- The Brie Carre Pizza Contributes to maximum Total Quantities
- The Brie Carre Pizza Contributes to minimum Total Orders

### Conclusion

The given dataset is a useful tool for examining the year's worth of sales at a fictitious pizza restaurant. It can be used to investigate a number of suggested analysis inquiries about pizza orders and sales. Depending on the precise issues and objectives of the analysis, Excel or other data analysis tools and techniques may be used.

The dataset provides a thorough overview of the sales and ordering trends for pizza, which may be utilised to develop insights and make sensible decisions.

### Project owner

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**Do you have any questions?**



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