

Pizza Sales Analysis Report

Introduction

The Pizza Sales Analysis project aimed to gain insights into pizza sales data, including revenue, order trends, pizza categories, and more. The analysis involved SQL queries and Excel operations to clean the data, perform calculations, and create visualizations...

Excel Operations

In the Pizza Sales Analysis project, several Excel operations performed to preprocess the data, perform calculations, and generate visualizations. The following operation are performed:

Data Preprocessing

1. Extracting Day from Date Column:

To analyze the daily trend of pizza sales, the day of the week was extracted from the "Date" column. The formula `=TEXT([@Date],"dddd")` was used, which converts the date into the full weekday name (e.g., Monday, Tuesday). This enabled the grouping and analysis of sales data based on the specific day of the week.

2. Calculating Average Order Value:

To calculate the average order value, an additional column was inserted after the "Order_ID" column. Then, the formula `=1/COUNTIF(A:A,[@[Order_ID]])` was used to calculate the reciprocal or fraction of the total occurrences of a specific "Order_ID" value. This effectively calculated the average order value by dividing 1 by the count of occurrences of each unique order ID. This approach was used since the distinct function was not available directly in the pivot table for the "Order_ID" column.

Visualizations

❖ Daily Trend for Total Orders

To analyze the daily trend for the total number of orders placed over the analyzed period, a Column chart titled "Daily Trend for Total Orders" was created. The X-axis represents the days of the week, such as Sunday, Monday, Tuesday, and so on. The Y-axis represents the total count of orders placed for each respective day.

This visualization provides insights into the fluctuations in order volume throughout the week, highlighting peak and low periods of order activity. By examining the chart, it becomes possible to identify which days have higher or lower order counts, enabling better resource allocation, staffing, and inventory management.

❖ Hourly Trend for Total Orders

To analyze the hourly trend for the total number of orders placed throughout the day, a line chart titled "Hourly Trend for Total Orders" was created. The X-axis represents the hours of the day, ranging from 9 AM to 11PM, indicating each hour. The Y-axis represents the total count of orders placed for each respective hour.

This visualization provides insights into the fluctuations in order volume at different times of the day, helping identify peak and low periods of order activity. By examining the chart, it becomes possible to understand the patterns of order placement throughout the day, enabling better resource allocation, staffing, and operational planning..

❖ Percentage of Sales by Pizza Category

To analyze the distribution of sales by pizza category, a Doughnut chart titled "Percentage of Sales by Pizza Category" was created. The chart visually represents the proportion of total sales contributed by each pizza category.

Each pizza category, such as "Classic," "Veggie," ,"Supreme" and "Chicken," is represented as a slice of the Doughnut chart. The size of each slice corresponds to the percentage of total sales that category contributes. This visualization provides a clear understanding of the relative popularity and contribution of each pizza category to the overall sales. By examining the chart, it becomes evident which categories are more dominant in terms of sales.

❖ Percentage of Sales by Pizza Size

To analyze the distribution of sales by pizza size, a pie chart titled "Percentage of Sales by Pizza Size" was created. The chart visually represents the proportion of total sales contributed by each pizza size.

Each pizza size, such as "Small," "Medium," "Large," and so on, is represented as a slice of the pie chart. The size of each slice corresponds to the percentage of total sales that size contributes. This visualization provides a clear understanding of the relative popularity and contribution of each pizza size to the overall sales.

❖ Funnel Chart for Total Pizza Sold by Pizza Category

To analyze the total number of pizzas sold by pizza category, a funnel chart titled "Total Pizza Sold by Pizza Category" was created. The chart visually represents the volume of pizza sales in descending order across different categories.

Each pizza category, such as "Classic," "Veggie," "Supreme" and "Chicken," is represented as a section of the funnel chart. The width of each section corresponds to the total quantity of pizzas sold for that category. This visualization provides a clear understanding of the relative performance of each category in terms of total pizzas sold.

❖ Bar Chart for Top 5 and Bottom 5 Sellers

To analyze the performance of pizza sellers, two separate bar charts titled "Top 5 Sellers" and "Bottom 5 Sellers" were created. The charts visually represent the total number of orders for each pizza name, highlighting the top and bottom performers.

In the "Top 5 Sellers" bar chart, the top five pizza names with the highest total number of orders are represented by vertical bars. The Y-axis represents the total number of orders, while the X-axis represents the pizza names. The length of each bar corresponds to the total number of orders, allowing for easy comparison between the top performers.

According to the data, the top five sellers in terms of the total number of orders are as follows:

1. The Classic Deluxe Pizza
2. The Hawaiian Pizza
3. The Barbecue Chicken Pizza
4. The California Chicken Pizza
5. The Pepperoni Pizza

By analyzing the bar chart, it becomes clear which pizzas have the most significant customer demand based on the total number of orders.

In the "Bottom 5 Sellers" bar chart, the bottom five pizza names with the lowest total number of orders are represented by vertical bars. The Y-axis represents the total number of orders, while the X-axis represents the pizza names. The length of each bar corresponds to the total number of orders, allowing for easy comparison between the bottom performers.

According to the data, the bottom five sellers in terms of the total number of order are as follows:

1. The Brie Carre Pizza
2. The Chicken Pesto Pizza
3. The Calabrese Pizza
4. The Mediterranean Pizza

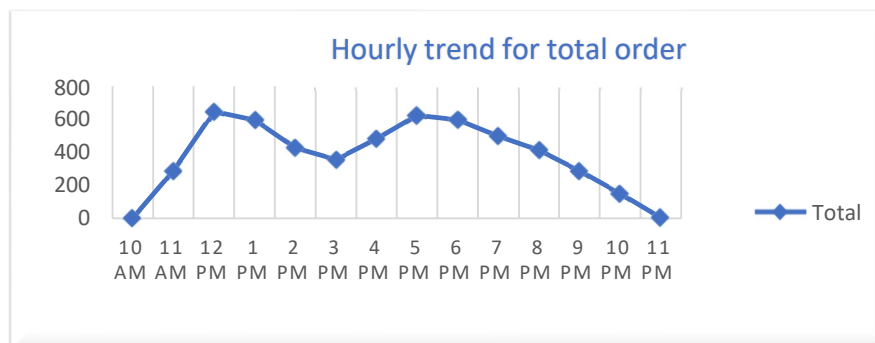
These pizza names exhibited the lowest total number of orders, indicating lower popularity among customers. Analyzing the bar chart allows for identifying pizzas with lower demand based on the total number of orders.

Understanding the performance of both the top and bottom sellers provides valuable insights for business decisions, such as menu optimization, inventory management, and marketing strategies. By focusing on the most popular pizzas and addressing the performance of the bottom sellers.

Analysis and Key Findings

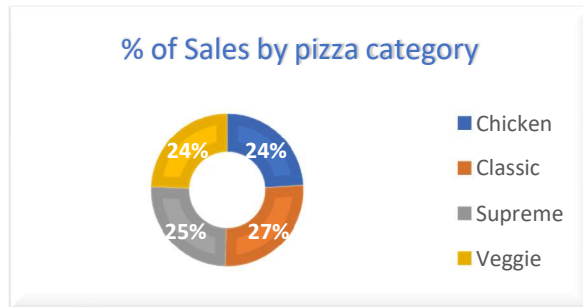
➤ Revenue Trends

The analysis of revenue trends revealed interesting insights over the analyzed period. The line chart "Hourly Trend for total orders" displayed the Hourly revenue trends, indicating fluctuations in revenue over time. The chart demonstrated that revenue remained relatively stable with some minor variations throughout the analyzed period.



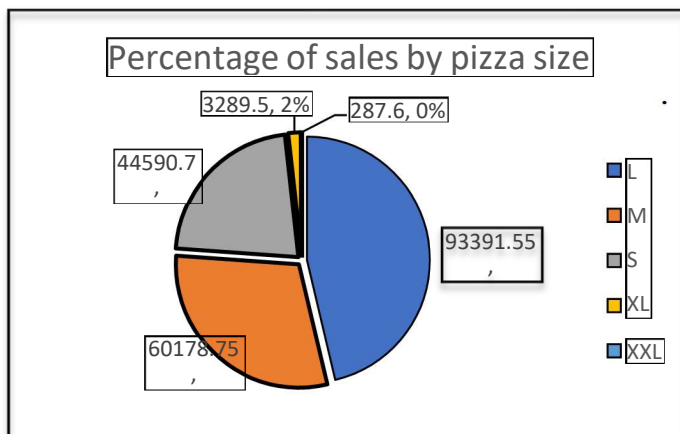
➤ Popular Pizza Categories

Based on the analysis of sales data, certain pizza categories emerged as popular choices among customers. The "Percentage of Sales by Pizza Category" doughnut chart highlighted the distribution of sales across different pizza categories. It revealed that the "Classic" and "Supreme" categories were the most popular, contributing a significant portion of the total sales.



➤ Customer Preferences

The analysis provided insights into customer preferences regarding pizza sizes. The "Percentage of Sales by Pizza Size" pie chart showcased the distribution of sales across different pizza sizes. It revealed that Large-sized pizzas were the most preferred by customers, accounting for the majority of sales. Medium and small sizes also had a significant share, while other sizes had relatively lower sales



Recommendations

Based on the analysis findings, the following recommendations are suggested:

1. **Menu Optimization:** Given the popularity of the "Classic" and "Supreme" pizza categories, it would be beneficial to focus on optimizing these categories by introducing new variations or specials to attract more customers.
2. **Size Bundles and Offers:** As Large-sized pizzas have the highest sales, consider introducing size-based bundles or offers to encourage customers to try different sizes. This strategy can help increase sales of other pizza sizes and diversify the customer base.
3. **Customer Surveys:** Conduct customer surveys or gather feedback to gain deeper insights into customer preferences, flavors, or other factors. This information can guide future product development and menu enhancements to cater to evolving customer tastes.
4. **Sales Performance Evaluation:** Regularly monitor the performance of pizza sellers, particularly the top performers, and recognize their contributions.

Implement strategies such as incentives or rewards to motivate and encourage all sellers to improve their sales performance.

Conclusion

The Pizza Sales Analysis project provided valuable insights into revenue trends, popular pizza categories, and customer preferences. The findings can be used to optimize sales strategies, refine menu offerings, and improve customer satisfaction