

## **Pizza Sales Analysis Summary**

This pizza sales dashboard is a powerful tool that displays key metrics and trends for the period between January 2015 and December 2015. It incorporates multiple visualizations, including bar charts, pie charts, and KPIs, allowing for an in-depth analysis of pizza sales across different categories, sizes, time periods, and product performance. MySQL queries were used for efficient data retrieval, and extensive data cleaning was carried out to ensure the highest accuracy of the results presented.

### **Key Metrics and Performance Indicators:**

- **Total Revenue:** \$817,860
- **Average Order Value (AOV):** \$38.31
- **Total Pizzas Sold:** 49,574 pizzas
- **Total Orders:** 21,350 orders
- **Average Pizzas Per Order:** 2.32 pizzas

### **Daily and Monthly Trends for Total Orders:**

- **Daily Orders (Bar Chart Representation):**
  - **Friday** sees the highest number of orders, accounting for roughly **18.7%** of the total weekly orders.
  - **Saturday** is close behind with **17.5%**, indicating that weekends are peak periods for pizza sales.
  - The rest of the week shows more even distribution:
    - **Thursday (16%),**
    - **Wednesday (15.5%),**
    - **Tuesday (14%),**
    - **Monday (11%),**
    - **Sunday (7%),** reflecting lower sales.
- **Monthly Orders (Line Chart Representation):**
  - **May** saw a peak in pizza orders, representing approximately **9%** of total orders for the year.
  - The months of **July** and **January** showed increased activity, as these months accounted for high sales volumes, each contributing around **8-9%**.
  - **February** and **November** had the lowest sales, contributing just **6-7%** of total orders.

### **Sales by Pizza Category and Size:**

- **Pizza Categories (Pie Chart Representation):**
  - The **Classic** pizza category dominated sales, making up **30%** (14,888 pizzas) of the total pizzas sold.
  - The **Supreme** category accounted for **24.1%**, followed by **Veggie** with **23.7%**, and **Chicken** at **22.2%**.
- **Pizza Sizes (Pie Chart Representation):**

- **Large-sized pizzas** were the most popular, making up a significant **45.89%** of total sales.
- **Medium-sized pizzas** contributed **30.49%**, while **Regular-sized pizzas** accounted for **21.77%**.
- **X-Large** and **XX-Large** sizes had a minor share of just **1.72%**, showing customer preference for moderate-sized pizzas.

### Best Sellers Overview:

- **Top 5 Pizzas by Revenue:**
  - The **Thai Chicken Pizza** generated the highest revenue, accounting for **5.3%** of the total revenue with \$43K.
  - Other high performers include:
    - The **Barbecue Pizza** (\$41K, **5.0%**),
    - The **Californian Pizza** (\$41K, **5.0%**),
    - The **Hawaiian Pizza** (\$38K, **4.7%**),
    - The **Spicy Italian Pizza** (\$35K, **4.3%**).
- **Top 5 Pizzas by Quantity:**
  - The **Classic Deluxe Pizza** topped the quantity chart, with **2.5K pizzas sold** (**5.05%** of total pizzas sold).
  - Other high-selling pizzas by quantity were:
    - The **Hawaiian** and **Pepperoni** (both **2.4K** or **4.8%** of total pizzas),
    - The **Barbecue Pizza** and **Thai Chicken Pizza** with similar numbers.

### Worst Sellers Overview:

- **Bottom 5 Pizzas by Revenue:**
  - The **Brie Carre Pizza** was the lowest performer, contributing only **\$12K** or **1.5%** of total revenue.
  - The **Green Garden Pizza** generated \$14K (**1.7%**) and the **Spinach Pizza** made \$15K (**1.8%**).
- **Bottom 5 Pizzas by Quantity:**
  - The **Brie Carre Pizza** had the lowest number of orders with **490 pizzas sold** (just **0.98%** of total orders).
  - Other low performers were:
    - The **Calabrese Pizza** (**937 units**, **1.89%**),
    - The **Mediterranean Pizza** (**912 units**, **1.84%**),
    - The **Spinach Pizza** (**970 units**, **1.95%**).

### Insights on Busiest Days and Months:

- **Busiest Days:**
  - Sales surge on **Fridays and Saturdays**, making up around **36.2%** of weekly orders.
  - Friday evening sees the highest traffic, followed closely by Saturday evening.
- **Busiest Months:**
  - **July** and **January** are peak months, each contributing around **8-9%** to total sales.

- These months may correlate with holiday seasons and promotional events, driving increased demand.

### Sales Performance by Category and Size:

- **Category Analysis:**
  - The **Classic** category, with nearly **30%** of sales, leads in both revenue and quantity, proving to be the most popular category.
  - **Supreme**, **Veggie**, and **Chicken** categories are relatively close, each contributing around **22-24%** of total pizzas sold.
- **Size Analysis:**
  - **Large Pizzas** dominate the market, making up nearly **46%** of total sales.
  - Smaller sizes like **Medium** and **Regular** sizes contribute significantly but fall behind, at **30.49%** and **21.77%**, respectively.
  - Larger sizes, like **XX-Large** and **X-Large**, contribute to less than **2%**, indicating customer preference for smaller, more manageable pizza sizes.

### Data Cleaning and MySQL Query Use:

- **Data Cleaning:**
  - Extensive cleaning was done to remove duplicates, erroneous records, and irrelevant entries. This ensures the integrity of insights drawn from the dashboard.
  - Missing values were handled appropriately, and sales data were aggregated by category, size, and date for accurate representation.
- **MySQL Queries:**
  - MySQL was employed to extract and organize data efficiently. The queries helped form the underlying dataset by filtering data based on date, pizza category, and size.
  - Complex queries were used to calculate metrics like **total pizzas sold**, **total revenue**, and performance indicators for each pizza type and size.

### Visual Elements:

- **KPI Cards:**
  - Key figures like **total revenue**, **AOV**, **total orders**, and **average pizzas per order** are highlighted to give an instant overview of sales performance.
- **Bar Charts:**
  - Display daily and monthly trends, allowing users to identify peak sales periods.
- **Pie Charts:**
  - Provide a breakdown of sales by pizza category and size, illustrating customer preferences in a visual manner.
- **Stacked Bar Charts:**
  - Compare the best and worst-selling pizzas by revenue, quantity, and total orders, providing a comprehensive comparison of product performance.

## **Data generated by MySQL queries:**

### **Key Performance Indicators (KPIs):**

- Total Revenue: \$817,860
- Average Order Value: \$38.31
- Total Pizzas Sold: 49,574
- Total Orders: 21,350
- Average Pizzas Per Order: 2.32

### **2. Daily Sales Trends:**

- Busiest Days: Friday (18.7%), Saturday (17.5%)
- Least Busy Day: Sunday (7%)

### **3. Monthly Sales Trends:**

- Top Month: May (9% of total orders)
- Lowest Months: February, November

### **4. Sales by Category:**

- Classic Pizza: 30%
- Supreme Pizza: 24.1%
- Veggie Pizza: 23.7%
- Chicken Pizza: 22.2%

### **5. Top Pizzas by Revenue:**

- 1st: Thai Chicken Pizza (\$43,000)
- 2nd: Barbecue Pizza (\$41,000)
- 3rd: Californian Pizza (\$41,000)