# Pizza My Heart – Sales Dashboard Analysis

**Project Overview**

“Pizza My Heart” is a fictional pizza business seeking to understand its sales performance across different pizza types, sizes, and time periods. This project focuses on analyzing the business’s historical order data to uncover insights about customer behavior, top-selling pizzas, revenue trends, and product performance. The final outcome is an interactive Power BI dashboard designed to support business decision-making and strategic planning.

**Business Objective**

The primary goals of this analysis are to:

* Determine the most popular and highest-grossing pizza types and categories.
* Understand ordering patterns by day, month, and pizza size.
* Compare vegetarian vs. non-vegetarian preferences.
* Identify trends in single vs. multiple-quantity orders.
* Provide actionable insights to improve marketing, inventory, and menu offerings.

**Dataset Overview**

The dataset contains order-level details from the pizza business and includes the following fields:

|  |  |
| --- | --- |
| Column Name | Description |
| Order\_ID | Unique ID for each order |
| Pizza\_Name | Name of the pizza ordered |
| Pizza Category | Pizza category (Classic, Supreme, etc.) |
| Size | Pizza size (S, M, L, XL) |
| Price | Unit price of the pizza |
| Qty | Quantity ordered |
| Date | Date of order |
| Vegetarian | Vegetarian or Non-Vegetarian |
| Order\_Type | **Single Quantity or Multiple Quantity** |
| Day\_of\_Week | Day the order was placed |
| Month\_Name | Derived from date for monthly analysis |
| Weekend\_Weekday | Classifies order date as weekday or weekend |
| Pizza\_ID | Unique ID for each pizza |

**Methodology**

1. **Data Cleaning**
   * Removed missing values and duplicates
   * Standardized pizza name formats
2. **Data Transformation**
   * Added new calculated columns: day of the week, weekend indicator, size groupings
   * Categorized vegetarian vs non-vegetarian options
   * Aggregated revenue and quantity metrics
3. **Exploratory Data Analysis (EDA)**
   * Grouped and analyzed data by pizza name, category, and size
   * Performed time-based analysis (monthly, weekly)
4. **Dashboard Design in Power BI**
   * Built a two-page interactive dashboard for Revenue and Orders
   * Implemented slicers for Pizza Category, Pizza Name, Size, Month, and Order Type
   * Visuals include: bar charts, line charts, pie charts, matrix tables, and card KPIs
   * Implemented Page Bookmark for easier access to the two dashboards

**Key Insights**

**Dashboard Page 1 – Revenue Analysis**

* **Top Pizza by Revenue**: Barbecue Chicken Pizza generated the highest revenue.
* **Category Performance**: Classic and Supreme pizzas dominate in revenue.
* **Most Ordered Size**: Large-sized pizzas (L) had the highest number of units sold.
* **Vegetarian vs Non-Vegetarian**: Non-vegetarian pizzas made up 75% of sales.
* **Single vs Multiple Orders**: Most orders (47.4K) were for a single quantity, but multiple orders (1.89K) drove higher average value.

**Dashboard Page 2 – Order Trends**

* **Monthly Revenue Trend**: Peaks in April, July, and November suggest seasonal sales spikes.
* **Day of the Week Trend**: Sunday is the most popular day for ordering pizza.
* **Weekend vs Weekday Sales**: Weekdays account for nearly 75% of total sales.
* **Category Orders**: Classic pizza leads in both quantity and revenue.

**Recommendations**

1. **Double Down on Top Performers**  
   Offer combo deals or promotions for the most popular pizza (Barbecue Chicken and Classic).
2. **Upsell Large Sizes**  
   Since L and XL sizes perform well, provide bulk purchase incentives or party packs.
3. **Leverage Sunday Sales**  
   Run Sunday-only deals or family discounts to drive even more weekend revenue.
4. **Vegetarian Growth Opportunity**  
   Consider expanding vegetarian options or launching a new veggie-exclusive menu.
5. **Encourage Multiple Orders**  
   Bundle deals can convert single quantity buyers into bulk buyers.

**Tools & Skills Used**

* **Power BI** – Dashboard design and visualization
* **Excel** – Data cleaning and preprocessing
* **Data Analysis** – Aggregations, trend analysis, category analysis
* **Business Intelligence** – Deriving strategic insights for business decisions

**Future Enhancements**

* Integrate **customer reviews or feedback** for sentiment analysis
* Build a **forecasting model** for monthly revenue prediction
* Include **delivery time tracking** to improve customer experience insights
* Add a **customer loyalty metric** or return purchase behavior analysis

**Challenges & Lessons Learned**

* Learned how to create dynamic dashboards using slicers and filters for interactive storytelling.
* Understood how to present categorical data in a visually compelling and digestible way.
* Gained experience converting raw transaction-level data into actionable insights.