

Project Summary: Comprehensive Pizza Sales Analysis Using SQL

This project entails a detailed exploration of pizza sales data using SQL to uncover actionable insights and enhance business performance. The dataset includes comprehensive information on orders, customers, pizzas, and sales transactions, providing a rich foundation for analysis. The study focuses on multiple dimensions of sales performance, leveraging advanced SQL techniques to deliver data-driven insights and recommendations.

Objectives

The project seeks to:

1. Identify the most popular pizza types and sizes.
2. Analyze peak sales times and daily order trends.
3. Examine revenue trends and category contributions.
4. Understand customer preferences to guide inventory and marketing strategies.

Methodology

A range of SQL techniques was employed, including:

- **Data Cleaning:** Ensuring the dataset was accurate and complete for analysis.
- **Aggregations and Joins:** Combining data from multiple tables to create a unified view.
- **Window Functions:** Analyzing trends such as cumulative revenue over time.

The analysis covered basic, intermediate, and advanced queries to provide granular insights:

- **Basic Analysis:** Total orders placed (21,350), revenue generated (₹8,17,860), most ordered pizza size (Large), and the highest-priced pizza (The Greek Pizza).
- **Intermediate Analysis:** Distribution of orders by hour revealed the peak time (12 PM–1 PM), with an average of 138 pizzas ordered per day.
- **Advanced Analysis:** Revenue contributions by pizza categories showed that the Classic category led with 26.91%, followed by Supreme (25.46%), Chicken (23.96%), and Veggie (23.68%).

Key Insights

1. **Popular Items:**
 - Large pizzas are the most ordered size, indicating customer preference for value or sharing options.
 - The Classic category dominates sales, followed by significant contributions from other categories.

2. Peak Sales Hours:

- The highest number of orders occur between 12 PM and 1 PM, emphasizing the lunch hour's importance.

3. Revenue Distribution:

- A balanced revenue distribution across categories suggests diverse customer tastes, but with Classic pizzas driving the most revenue.

4. High-Performing Pizzas:

- Top 3 pizzas in each category generate significant revenue, highlighting customer favorites.

Impact

By providing clear visibility into sales patterns and customer behavior, the project delivers actionable insights to:

- Optimize inventory based on high-demand items and peak hours.
- Target marketing campaigns around the most popular pizzas and times.
- Enhance operational efficiency by aligning staffing with sales patterns.

Conclusion

The SQL-based analysis of PizzaHub's sales data offers a clear roadmap to boost revenue and customer satisfaction. The findings enable the business to make informed decisions about inventory management, marketing strategies, and service enhancements, fostering sustainable growth.