Problem Statement
Pizza Sales Analytics Dashboard

Background

Pizza restaurants generate a large volume of transactional data related to customer orders, pizza categories, sizes, pricing, and order timestamps. While this data is stored in relational databases, it is often underutilized and not systematically analyzed to derive meaningful business insights. As a result, decision-makers face challenges in understanding sales performance, customer preferences, and operational demand patterns.

Problem Definition

The core problem addressed in this project is the lack of an integrated analytical framework that converts raw pizza sales data into actionable insights. Without structured SQL-based analysis and intuitive visual reporting, businesses struggle to answer critical questions such as which pizzas generate the highest revenue, when peak sales occur, how demand varies by category and size, and which products underperform.

Analytical Challenges

- Raw transactional data is not optimized for business-level analysis.
- Difficulty in identifying sales trends across time (daily, monthly, yearly).
- Limited visibility into top-performing and low-performing pizza items.
- Inability to measure key performance indicators (KPIs) such as total revenue, total orders, and average order value.
- Lack of visual tools to communicate insights effectively to stakeholders.

Solution Approach

To address these challenges, this project implements a structured SQL-based data analysis pipeline combined with an interactive Power BI dashboard. SQL queries are used to clean, aggregate, and analyze the sales data to calculate KPIs, identify trends, and rank product performance. The analyzed data is then visualized through a dashboard that enables users to explore sales insights dynamically.

Project Objectives

- Analyze pizza sales data using SQL to extract meaningful business insights.
- Calculate key performance indicators such as total revenue, total orders, and average order value.
- Identify top-selling and least-selling pizzas based on quantity and revenue.
- Analyze sales distribution by pizza category and size.
- Understand sales trends across different days, months, and time periods.
- Present insights through an interactive dashboard to support data-driven decision-making.

Business Impact

The outcome of this project enables restaurant owners, managers, and analysts to make informed strategic and operational decisions. By leveraging SQL-driven analysis and visual dashboards, stakeholders can optimize inventory planning, improve menu offerings, align staffing with peak demand, and design targeted marketing strategies. Ultimately, the solution enhances operational efficiency, profitability, and customer satisfaction.