

Pizza Sales Analysis Using SQL



End-to-End Business Insights | Beginner → Advanced SQL Queries

Project Objective

- ⌚ **Data Analysis:** Analyzing large-scale transactional pizza sales data using MySQL.
- ⌚ **Strategic Insights:** Identifying sales trends, revenue drivers, and consumer behavioral patterns.
- ⌚ **Advanced SQL:** Solving complex business queries from basic aggregations to advanced window functions.



Dataset Overview



Orders

Transaction ID, date, and timestamp of every customer order.



Order Details

Linking orders to specific pizzas and quantities purchased.



Pizzas

Dimensions including size, type, and specific pricing data.



Pizza Types

Categorization, names, and ingredients for all menu items.

Orders



Order Details



Pizzas



Pizza Types

| Basic SQL Insights

21,350

TOTAL ORDERS

\$817.8K

TOTAL REVENUE

\$35.95

HIGHEST PRICE

L

COMMON SIZE

```
SELECT COUNT(order_id) as total_orders FROM orders;  
SELECT SUM(quantity * price) FROM order_details JOIN pizzas ON ...
```

| Key Business Findings



- Douglas **Volume Leader:** Large-sized (L) pizzas dominate orders across all categories, indicating a preference for value and sharing.
- Yellow Diamond **Revenue Driver:** A concentrated group of premium pizzas accounts for 35% of total revenue despite lower order frequency.
- User Group **Behavior:** Customer AOV (Average Order Value) increases significantly when multiple categories are mixed in a single order.

Intermediate Analysis

Category-wise Pizza Demand



```
SELECT category, SUM(quantity) FROM pizza_types JOIN pizzas ... GROUP BY 1 ORDER BY 2 DESC;
```

Market Dynamics

Temporal Trends

Peak ordering hours consistently occur between **12:00 PM - 1:00 PM** and **6:00 PM - 8:00 PM**, aligning with lunch and dinner cycles.

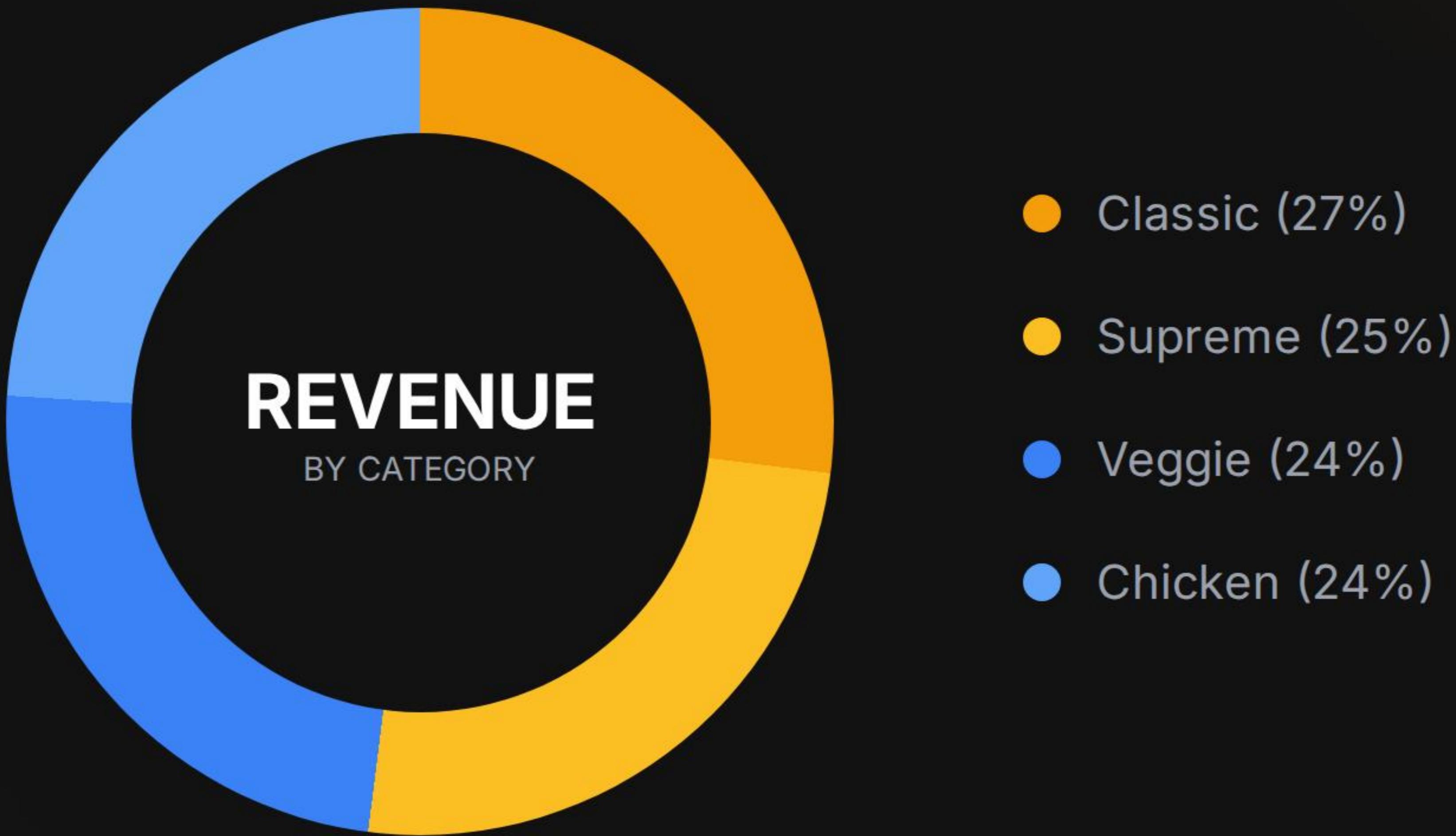
Category Dominance

Classic and **Supreme** categories represent over 50% of the total order volume, forming the core menu strength.

Daily Stability

Baseline demand remains stable throughout the week, with predictable spikes exceeding 15% on **Friday evenings**.

Advanced SQL Analysis



Note: Utilized **WINDOW FUNCTIONS** (RANK, OVER, PARTITION BY) for category-wise ranking and cumulative totals.

Strategic Insights

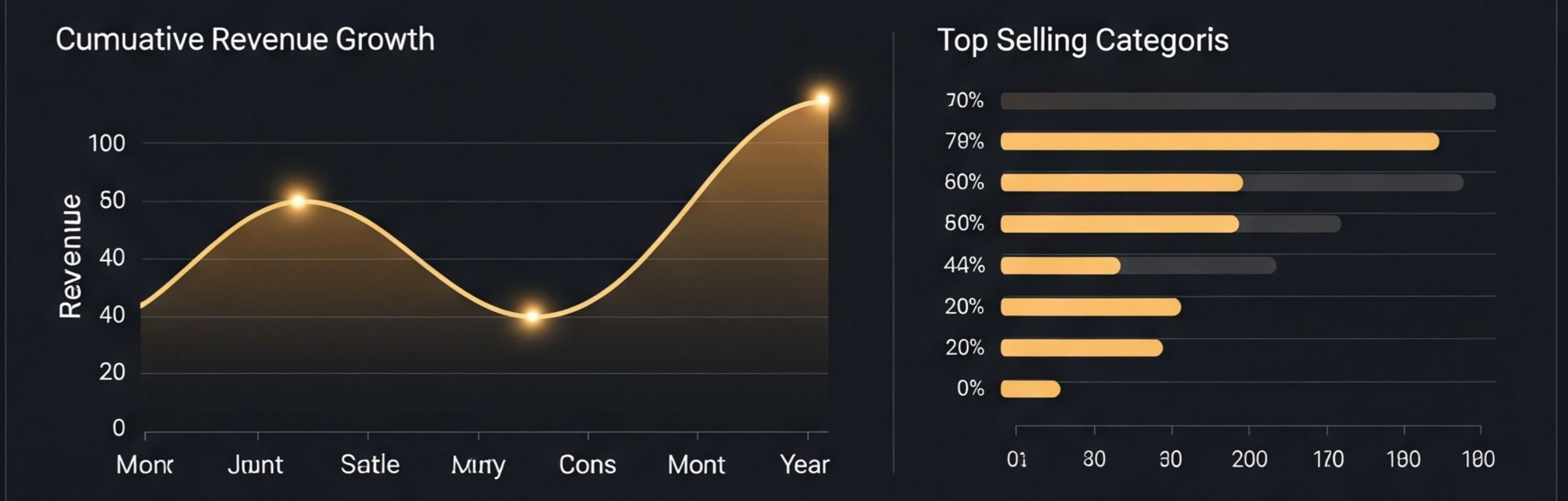
Growth Trajectory

Cumulative revenue analysis reveals a consistent upward trend, suggesting strong customer retention and positive market reception.

High-performing pizza types (Top 3) contribute disproportionately to the bottom line, highlighting the 80/20 rule in the menu performance.

ADVANCED ANALYTICS: CUMULATIVE REVENUE TRENDS

Pizza Sales



Skills & Tools Used



Advanced SQL

Multi-table Joins, Aggregations, Window Functions, and Common Table Expressions (CTEs).



MySQL

Relational Database Management and Query Optimization for large datasets.



Analytics

Converting raw transaction logs into meaningful business intelligence and insights.

| Final Takeaways

- ✓ **Actionable Intel:** Successfully transformed 48,000+ rows of raw data into concise management reports.
- ✓ **Business Value:** Solved critical inventory and staffing problems using data-driven evidence.
- ✓ **Technical Depth:** Strengthened proficiency in complex relational queries and performance tuning.

Conclusion

"Data is only as valuable as the insights we can extract from it. Through this project, I proved that SQL can bridge the gap between messy tables and strategic business decisions."



Let's Connect

Open to Data Analyst Intern / Entry-Level Roles

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 [Message for Portfolio](#)

 Feedback and connections are always welcome!