

# Restaurant Sales & Menu Performance Analysis

---

## 90-Day Operational & Revenue Performance Review

**Ninad Jumde**  
**Data Analyst**  
**Tools: SQL**

---

## Project Introduction

This project presents a 90-day performance analysis of a multi-segment restaurant to evaluate revenue drivers, menu efficiency, customer purchasing behavior, and time-based demand patterns. Using SQL-based transactional data analysis, the study identifies revenue concentration, pricing effectiveness, and operational pressure points to support data-driven decisions in menu optimization, capacity planning, and revenue growth.

---

## Executive Summary

- \$159K revenue from 5,343 orders over 90 days
- 60% revenue concentrated in afternoon peak hours
- Premium-priced items contribute 58% of revenue
- Weekday demand is 2x higher than weekends
- Revenue heavily concentrated among top 10 dishes

# Key Insights

## 1. Business Overview

### Data scope

The analysis covers 90 days of operations, during which the restaurant generated \$159,218 in revenue from 5,343 orders, averaging 2.26 items per order across 32 dishes spanning four menu segments (American, Asian, Mexican, and Italian).

---

## 2. Sales & Revenue Performance

### Revenue Concentration

Five core dishes — Korean Beef Bowl, Spaghetti & Meatballs, Tofu Pad Thai, Hamburger, and Cheeseburger — contribute nearly 28% of total revenue, indicating revenue concentration among a limited set of high-performing items.

### Sales Concentration

The top 10 dishes (out of 32) account for 44.8% of total items sold (12,097 units), highlighting strong demand skew toward a small group of menu items.

### Segment Performance

The Asian menu segment leads in order volume (3,470 orders), while the Italian segment generates the highest revenue (\$49,462.70), indicating revenue performance is influenced by both pricing strategy and demand patterns.

### Average Order Value

The restaurant maintains an average order value (AOV) of \$29.80, reflecting moderate per-transaction revenue performance.

### Day-Level Sales Volume

Monday records the highest sales volume (1,988 items sold), followed by Friday and Tuesday, while midweek and Saturday show comparatively lower activity, indicating early-week demand strength.

---

## 3. Menu Performance & Pricing

### Low-Performing item

Chicken Tacos are the least ordered item (123 orders; ~\$1,470 revenue), indicating limited demand and potential for menu rationalization.

### Pricing Structure by Segment

The Italian menu segment carries the highest average price (\$16.75), positioning it as premium, while American (\$10.07) and Mexican (\$11.80) serve as value-oriented offerings.

### Premium Demand Strength

Despite premium pricing, Korean Beef Bowl and Spaghetti & Meatballs maintain strong demand and revenue performance, indicating high perceived value among customers.

### **Price Range Variability**

The Asian segment demonstrates the widest price range, while the Italian segment operates within a consistently premium bracket, reinforcing differentiated pricing strategies across segments.

### **Revenue Mix by Price Tier**

Higher-priced items generate \$92,288 (58% of total revenue), outperforming medium and low-priced tiers, indicating strong revenue contribution from premium offerings.

---

## **4. Customer Ordering Behaviour**

### **Order Size Distribution**

Small orders dominate with 3,612 transactions, significantly exceeding large orders, indicating primarily individual purchasing behavior and potential opportunities for upselling.

### **Weekday vs Weekend Demand**

Weekdays account for 3,843 orders, more than double weekend orders (1,500), demonstrating strong weekday dependency and likely office-driven demand patterns.

---

## **5. Time-Based Performance**

### **Peak Hours**

Order volume peaks during 12–2 PM (lunch period), with a secondary surge between 5–8 PM, establishing these as primary operational pressure windows.

### **Day-Level Order Activity**

Monday leads in order volume (881 orders), followed by Sunday and Friday, indicating strong demand concentration at the beginning and end of the week.

### **Revenue by Time Segment**

Revenue is heavily concentrated in the afternoon (\$96,359; 60% of total revenue), followed by the evening (\$50,467), while daytime and nighttime collectively contribute only \$12,386, revealing significant temporal revenue imbalance.

---

## **6. Operational Insights**

### **Workload Distribution**

Kitchen workload is substantially lower during morning and late-night periods compared to peak afternoon and evening windows, indicating uneven operational demand.

# Strategic Recommendations

## 1. Optimize Peak-Time Operations

Increase staffing and kitchen preparedness during 12–2 PM and 5–8 PM, particularly on Mondays and Fridays, to reduce service bottlenecks and maintain service quality during peak demand windows.

## 2. Strengthen Off-Peak Revenue

Introduce targeted promotions (happy hours, bundle deals, limited-time offers) during morning and late-night periods to stimulate demand and improve capacity utilization in underperforming time slots.

## 3. Leverage High-Performing Core Items

Prioritize inventory planning and preparation efficiency for top-performing dishes such as Korean Beef Bowl, Hamburger, Cheeseburger, Tofu Pad Thai, and Spaghetti & Meatballs, as these items drive a disproportionate share of revenue.

## 4. Optimize Menu Portfolio

Reassess low-performing items such as Chicken Tacos and other weak-demand dishes for potential removal, reformulation, or repositioning to simplify operations and improve menu efficiency.

## 5. Refine Pricing Strategy

- Test incremental price increases on high-demand premium items that show strong value perception.
- Evaluate potential price adjustments or bundling strategies for high-priced, low-demand items (e.g., Shrimp Scampi) to improve conversion rates.

## 6. Capitalize on Premium Revenue Strength

Since 58% of revenue comes from higher-priced items, maintain premium positioning while reinforcing perceived value through portion sizing, presentation, or strategic menu placement

## 7. Increase Weekend Demand

Develop weekend-focused campaigns (family combos, special menus, discounts) to reduce dependency on weekday traffic and stabilize revenue distribution across the week.

## 8. Increase Average Order Value (AOV)

Introduce upselling strategies such as combo meals, add-on prompts, and meal pairings to increase basket size, particularly given the dominance of small orders.

## Conclusion

The restaurant demonstrates strong revenue concentration across specific time periods, premium-priced items, and a limited set of core dishes. Strategic optimization of pricing, menu design, and time-based promotions can improve revenue balance, operational efficiency, and long-term profitability.

