

# Coffee Sales Analysis Report

## Executive Summary

This project analyzes coffee sales data to uncover customer purchasing patterns, peak sales periods, product performance, and revenue drivers. The goal is to support **data-driven decisions** related to inventory planning, staffing, pricing, and marketing strategies.

Key findings show that sales are highly concentrated during morning hours, a small set of products generates most revenue, and customer behavior varies significantly by time of day and weekday.

## Business Objectives:

- Identify peak sales hours and days
- Determine best- and worst-performing coffee products
- Understand customer preferences by time of day
- Analyze revenue and transaction value distribution
- Provide actionable recommendations to improve sales and efficiency

## Key Insights:

### Peak Sales Hours

#### Insight

- Sales are highest during **morning rush hours (7 AM – 10 AM)**.
- A smaller spike appears in the **late afternoon (3 PM – 5 PM)**.

#### Implication

- Coffee purchases are strongly tied to **work routines and breaks**.

## Best-Selling Products

### Insight

- **Espresso-based drinks** (Latte, Cappuccino, Americano) dominate total sales.
- A small number of products generate **most of the revenue (Pareto effect)**.

### Implication

- Core products drive business performance.
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## Weekday vs Weekend Patterns

### Insight

- **Weekdays** show higher transaction volume.
- **Weekends** have fewer transactions but **higher average order value**.

### Implication

- Customers spend more per visit on weekends.
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## Product Preference by Time of Day

### Insight

- **Morning:** Strong coffee (Espresso, Americano)
- **Afternoon:** Milk-based drinks and flavored coffees
- **Evening:** Cold drinks or specialty beverages (if available)

### Implication

- Customer preferences change by time of day.
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## Revenue Distribution

### Insight

- Revenue is **not evenly distributed** across hours or products.

- Peak hours contribute a **disproportionate share of daily revenue**.

### **Implication**

- Optimizing peak hours has the highest ROI.
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## **Price Sensitivity**

### **Insight**

- Higher-priced drinks still sell well during peak hours.
- Off-peak sales drop more sharply for premium products.

### **Implication**

- Customers are less price-sensitive when they “need” coffee.

# 💡 Recommendations:

## ☕ Operations & Staffing

- Increase **staffing during 7–10 AM** to reduce wait times.
  - Reduce staffing during low-traffic hours to control costs.
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## 📦 Inventory Management

- Stock **top-selling drinks and ingredients** more heavily during peak hours.
  - Reduce overstock of slow-moving products.
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## 🕒 Time-Based Promotions

- Offer **discounts or bundles during off-peak hours** (e.g., 2–5 PM).
  - Promote afternoon drinks with combo deals (coffee + pastry).
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## 📈 Product Strategy

- Highlight best-sellers on menus and digital boards.
  - Introduce **limited-time flavors** during low-sales periods.
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## 💰 Pricing Strategy

- Maintain premium pricing during peak hours.
  - Use **dynamic pricing or loyalty rewards** to increase off-peak sales.
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## 🎯 Marketing & Customer Engagement

- Run **weekday morning loyalty programs** (e.g., “Buy 5 coffees, get 1 free”).
- Personalize offers based on purchase time and drink preference.