

Coffee Shop Sales Analysis

Introduction to Business Problem

- **The main objective of this project is to analyze retail sales data to gain actionable insights that will enhance the performance of the coffee shop.**
 - a. **Identifying Sales Trends:** Understanding how sales vary by day, hour, product category, and store location to optimize operations and maximize revenue.
 - b. **Improving Product Performance:** Determining which products or categories contribute most to sales and revenue to focus on bestsellers and redesign underperforming offerings.
 - c. **Enhancing Operational Efficiency:** Addressing variations in sales to align staffing, inventory, and promotional efforts with peak demand periods.
- **Recommended Analysis**
 - How do sales vary by day of the week and hours of the day ?
 - Are there any peak times for sales activity ?
 - What is the total sales revenue for each month ?
 - How does sales vary across different store locations ?
 - What is the average price/order per person ?
 - Which products are the best selling in terms of quantity and revenue ?
 - How do sales vary by product category and type ?

- **Key points**

- a. **Peak Sales Analysis:** Identified the most profitable times of day and days of the week for coffee sales, revealing opportunities to optimize operational schedules.
- b. **Top-Selling Products:** Discovered the best-performing coffee types and related products, enabling targeted promotions to boost revenue.
- c. **Revenue Distribution:** Analyzed sales across multiple store locations to identify high-performing outlets and potential areas for growth.
- d. **Customer Preferences:** Unveiled customer buying habits, including average order values and preferences for specific product categories.
- e. **Operational Recommendations:** Provided data-driven suggestions for improving inventory management and aligning resources with demand patterns.

These key points highlight actionable insights that align with common business objectives like increasing profitability, improving customer satisfaction, and streamlining operations

Key Performance Indicators (KPIs)

- **Total Sales Revenue:** Track the overall income generated within a specific period to measure business performance.
- **Average Revenue Per Order:** Calculate the average value of each transaction to understand customer spending habits.
- **Sales Volume by Product Category:** Monitor the number of units sold for each category to identify bestsellers and underperforming items.
- **Peak Sales Times:** Analyze sales by hour and day to identify periods of highest activity for staffing and inventory adjustments.
- **Revenue Contribution by Location:** Assess sales distribution across store locations to pinpoint high-performing and underperforming outlets.
- **Customer Traffic Patterns:** Measure the number of transactions during specific times to align operational resources with demand.
- **Profit Margins by Product:** Evaluate profitability at the product level to guide pricing and promotional strategies.

Data Source

- This data source is having one table by name coffee_shop_sales.xlsx :
- The dataset includes the following key fields:
 - **transaction_id**: Unique identifier for each transaction.
 - **transaction_date** and **transaction_time**: Date and time of each transaction.
 - **transaction_qty**: Quantity of items sold.
 - **store_id** and **store_location**: Information about the store.
 - **product_id**, **product_category**, **product_type**, and **product_detail**: Details about the products sold.
 - **unit_price**: Price per unit.

Goals

- **Maximizing Revenue**: Increase overall sales revenue by identifying high-performing products, peak sales times, and strategic opportunities for promotions.
- **Improving Customer Experience**: Enhance customer satisfaction by ensuring product availability during peak hours and tailoring offerings to customer preferences.
- **Operational Optimization**: Streamline staffing and inventory management based on demand patterns to reduce costs and improve efficiency.
- **Strategic Growth**: Use data insights to identify underperforming locations or products and develop actionable plans to improve their performance.