Executive Summary: Coffee Shop Sales Data Analysis

Introduction

This report provides a comprehensive analysis of the "Coffee Shop Sales" dataset, with the primary objective of uncovering key performance indicators (KPIs), identifying sales trends, and providing data-driven recommendations to optimize business operations and increase profitability. The analysis spans a full year, examining sales performance, customer behaviour, and product popularity across various dimensions including time, location, and product category.

Key Findings

The analysis reveals strong overall performance, with **Total Sales of $698,812.33** and a **Total Footfall of 149,116** customers. The average bill per person stands at **$4.69**, with an average of **1.44 items** per order, indicating healthy customer spending.

- **Temporal Trends:** Sales patterns show distinct peaks throughout the day. The strongest sales period occurs during the morning commute, peaking around **8 AM**, followed by a second, smaller peak in the afternoon at **3 PM**. Sales decline significantly after 6 PM. From a weekly perspective, weekdays maintain consistent sales volumes, while there is a noticeable dip in orders and footfall on weekends (Saturday and Sunday).

- **Top-Performing Products and Locations:** The analysis identifies the top five most popular products: **Barista Espresso**, **Brewed Herbal Tea**, **Gourmet**, **Brewed Coffee**, and **Hot Chocolate**. These core products are the primary drivers of revenue. Geographically, the **Kellen's Kitchen** location is the top performer, accounting for the highest footfall and total sales, followed by the **Lower Manhattan** and **Astoria** stores.

- **Customer and Order Behaviour:** The distribution of orders by size shows that Regular and Small sized orders are the most common, while Large and Not defined sizes make up a smaller portion of the total. This suggests a strong customer preference for standard-sized beverages.

Strategic Recommendations

Based on these insights, the following actions are recommended to further enhance business performance:

1. **Optimize Staffing and Inventory:** Allocate more staff and ensure sufficient inventory of top-selling products during the morning (8 AM) and afternoon (3 PM) peak hours to maximize sales and minimize wait times.

2. **Weekend Promotions:** Develop targeted marketing campaigns or special promotions for weekends to attract more customers and boost sales on historically slower days. This could include discounted weekend bundles or loyalty rewards.

3. **Capitalize on Top Products:** Launch campaigns that highlight and promote the top five products, as they are proven revenue generators. Consider introducing limited-time variations or new add-ons for these popular items to encourage repeat purchases.

4. **Leverage High-Performing Locations:** Study the operational and marketing strategies of the Kellen's Kitchen location to replicate its success in other, lower-performing branches. This includes analysing its product mix, customer service approach, and local marketing efforts.

Conclusion

This data analysis provides a clear and actionable roadmap for strategic decision-making. By leveraging these insights, the coffee shop can effectively optimize its operations, improve customer experience, and ultimately drive sustainable business growth and profitability. This project demonstrates the power of data analysis in transforming raw data into valuable business intelligence.