

Coffee Sales Analysis

Data analysis Project By **Rajnish Kumar Jha**





Objective of the Analysis

- To analyze coffee sales data and uncover patterns that can help improve business decisions.
- Identify top-performing products, locations, and sales trends over time.
- Support marketing and inventory strategies with data-driven insights.
- Provide actionable recommendations for maximizing sales and profitability.



Tools Used

- Microsoft Excel
- Data Cleaning & Formatting
- Pivot Tables for summarizing data
- Charts (Bar, Line, Pie) for visualization
- Conditional Formatting for highlighting key metrics
- Slicers and Filters for interactive dashboarding





Dataset Overview

Dataset Summary

- Total Records: 149,116 coffee sales transactions
- Time Frame: January 2023 to June 2023
- Data collected from multiple store locations

Data Cleaning & Transformation

- Removed missing, duplicate, or inconsistent entries
- Standardized formats for dates, categories, and price values
- Renamed columns for clarity and ease of analysis

Goal of Data Preparation

- To enable deep-dive analysis into:
 - Time-based trends
 - Product-wise and store-wise performance
 - Customer purchase patterns by hour and day

Original Key Variables

- Transaction ID, Transaction Date, Transaction Time
- Store Location, Store ID
- Product ID, Product Type, Product Category
- Product Details, Size
- Quantity, Unit Price

New Derived Columns Created

- Total Bill – ($\text{Quantity} \times \text{Unit Price}$)
- Month – Extracted from transaction date
- Weekday – To analyze daily performance (e.g., Monday, Tuesday)
- Hour – Extracted from transaction time to see peak hours

Key Insights & Trends

Highest Selling Product

Barista Espresso is the top-selling product with sales of ₹91,406.20, followed by Brewed Chai Tea and Hot Chocolate.

Category Distribution

Tea (39%) dominates category-wise sales, followed by Coffee (28%) and Bakery (12%) items. Non-core items like Branded, Loose Tea, and Flavours make up less than 5%.

Store Performance

Hell's Kitchen leads in revenue (₹2,36,511.17) and footfall, closely followed by Astoria and Lower Manhattan.

Weekday Sales

Monday to Saturday have almost equal sales, with consistent performance. Sunday shows a slight dip in both sales and footfall.

Sales Trend by Hour

Peak sales are observed between 8 AM to 10 AM, showing strong morning demand. Post 11 AM, there's a noticeable dip in the quantity ordered.

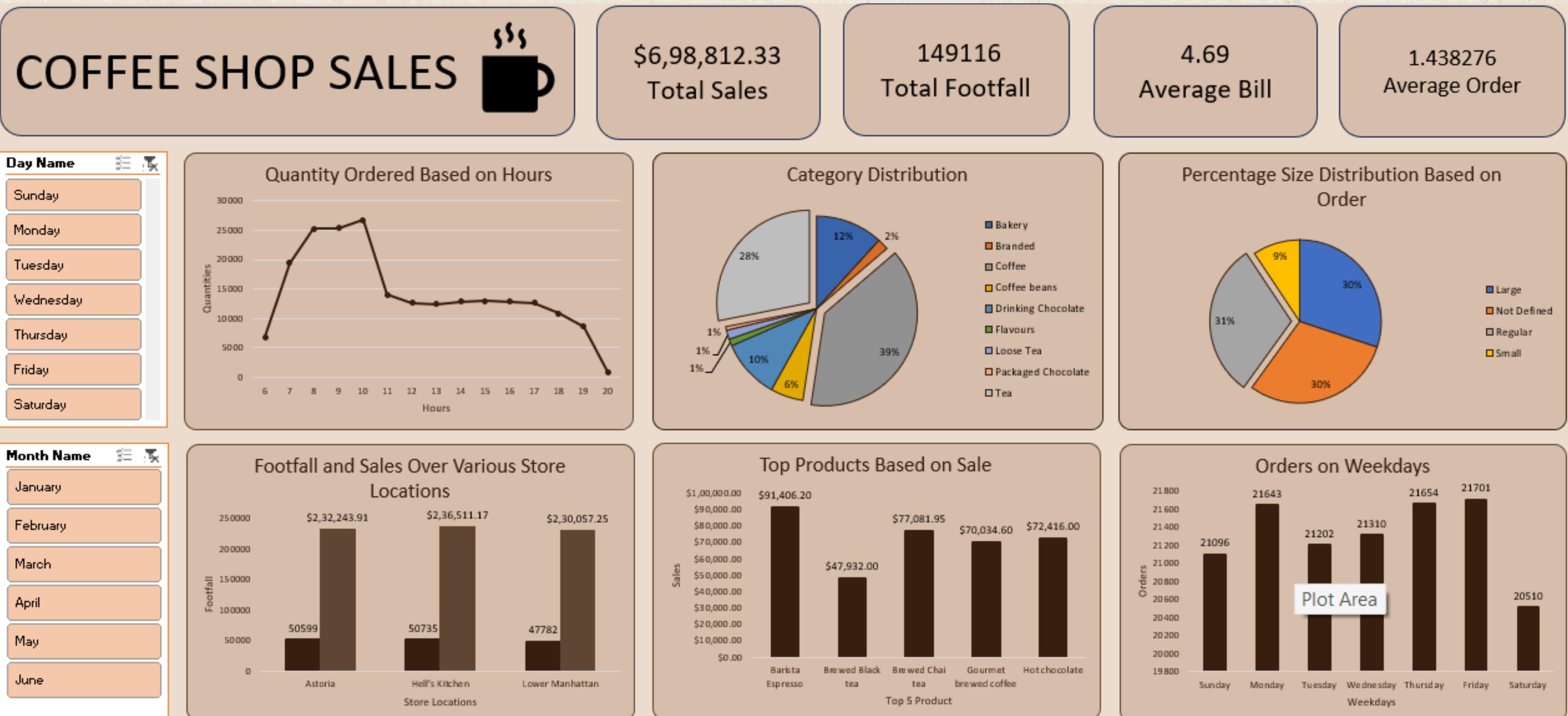
Size Preferences

Customers prefer Regular (31%), Large (30%), and Small (30%) sizes almost equally. Only 9% of orders had "Size Not Defined".

Overall Sales Metrics

- Total Sales: ₹6,98,812.33
- Total Footfall: 1,49,116
- Avg Bill per Person: ₹4.69
- Avg Order per Person: 1.44

Interactive Sales Dashboard (Excel)


Plot Area

Exploring the Dashboard

This Excel dashboard offers a clear, comprehensive, and interactive view of the coffee shop's sales performance between January and June 2023. It is designed to help stakeholders explore trends and insights easily, without diving into raw data.

◆ Key Metrics Highlighted

- Total Sales
- Total Footfall
- Average Bill per Person
- Average Orders per Person

◆ Interactive Filters & Slicers

- Month Selector – Instantly filter data to view performance for a specific month
- Day Selector – Analyze customer behavior across weekdays for better scheduling and promotions

◆ Dynamic Visuals

- All charts and graphs (e.g., hourly trends, top products, store-wise sales) auto-update based on filter selections
- Bar and Pie Charts enable quick visual comparison across product types, sizes, and store locations

This dashboard serves as a powerful decision-support tool, allowing stakeholders to gain real-time insights, identify trends, and make data-driven business decisions with ease.



Actionable Recommendations

As a result of our analysis, here are the key recommendations that can drive better performance across stores and product lines:

Product Optimization

- Focus promotional efforts on Barista Espresso and Brewed Chai Tea, our highest revenue generators.
- Consider discontinuing or repositioning low-performing items like Loose Tea and Flavours to reduce inventory cost.

Operational Improvements

- Increase staff during morning (8–10 AM) and evening (4–6 PM) hours to manage high footfall.
- Adjust production and inventory planning to align with peak demand periods and best-selling categories.

Store-Level Strategy

- Use the success of the Hell's Kitchen store as a model—study its promotions, layout, or service style.
- Target underperforming locations with localized campaigns or operational reviews.



Conclusion & Next Steps

To summarize, our insights from January to June 2023 have revealed valuable patterns that can support better decision-making.

Conclusion

- Customers consistently prefer tea-based drinks, especially on weekdays.
- Sales peak during morning and early evening hours, suggesting strong routine-based purchasing behavior.
- Certain stores and products significantly outperform others, presenting opportunities for both replication and optimization.

Next Steps

- Distribute the dashboard to store managers for ongoing performance tracking.
- Begin pilot campaigns using bundled offers and targeted promotions for top products.
- Plan a follow-up analysis with seasonal trends, customer feedback, and loyalty data to deepen insights



Q&A | Open Discussion

Thank you for your time and
attention



- I'd now like to open the floor for any questions, feedback, or suggestions from your end.
- I'm happy to walk through specific parts of the dashboard or dig deeper into any insight you'd like to explore further.