# COFFEE SHOP DATA ANALYSIS (EXCEL)

A Comprehensive Analysis of Coffee Shop Sales Data for Insights and Growth Date: January 2025



# **ANALYSIS REPORT**

## 1. Project Overview

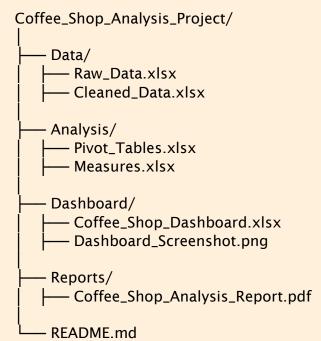
- **Objective**: To analyze coffee shop sales data and gain actionable insights to enhance performance and profitability.
- Tools Used: Microsoft Excel 2021 (Power Query, Power Pivot).

## 2. Data Sources

#### 2.1 Data File

- Path: Coffee Dataset.
- **Description**: Sales data of a coffee shop, including product details, transactions, and customer activity.

# 3. Directory Structure of the Project



## 4. External References

YouTube: WsCube Tech

• Data Source: Manven Analytics

## 5. Work-Flow

## **Step 1: Data Collection**

- **Description**: Opened the raw dataset and reviewed its structure.
- **Source File**: Coffee-Shop-Sales-Cleaned.xlsx.
- Actions Taken:
  - Verified column headers and data types.
  - o Identified potential issues such as missing values and duplicates.

## **Step 2: Data Preparation & Data Cleaning**

- **Description**: Performed data preparation using Power Query.
- Actions Taken:
  - o Changed Data Types:
    - transaction\_date: Converted from date/time to date format.
    - transaction\_time: Converted from decimal to time format.
    - unit\_price: Converted from decimal to currency format.
  - Cleaning Steps:

- Added a conditional column to categorize product\_details:
  - Lg: Large.
  - Rg: Regular.
  - Sm: Small.
  - Default: Not Defined.
- Replaced empty values in product\_details with "Not Defined."
- Removed white spaces using the Trim function in Power Query.
- Custom Columns Added:
  - Total\_Bill: Calculated as [transaction\_qty] \* [unit\_price].
  - Extracted Day Name, Month Name, and Hour for trend analysis.

## **Step 3: Data Analysis**

- Description: Used Pivot Tables for sales trend analysis.
- Steps Performed:
  - o Inserted Pivot Tables using data from the Data Model.
  - Created custom measures for analysis:
    - Total Revenue = SUM(transaction\_qty \* unit\_price).
    - Total Footfall = COUNT(transaction\_id).
  - o Insights Derived:
    - Peak sales occur on weekends.
    - Most revenue comes from the "Coffee" category.

## **Step 4: Dashboard Creation**

- **Description**: Designed an interactive dashboard in Excel.
- Components:
  - o KPIs:
    - Total Revenue.
    - Total Footfall.
    - Average Bill per Person.
    - Average Order Size.
  - o Charts:
    - Line Chart: Quantity ordered by hour of the day.
    - **Pie Chart**: Product category distribution.
    - Bar Chart: Revenue per store location.
    - Bar Chart: Top 5 products by revenue.
  - o Filters:
    - Day Name.
    - Month Name.

## 6. Outcomes and Results

The analysis revealed the following actionable insights:

- 1. Peak Sales Timing:
  - Insight: The majority of sales occur during early mornings (7 AM-10 AM) and weekends.
  - Recommendation:
    - Increase staffing during these peak hours to handle higher customer traffic.
    - Launch special breakfast combos to capitalize on the early-morning rush.
- 2. Top-Selling Products:
  - o **Insight**: The "Coffee" and "Bakery" categories contribute to 70% of the total revenue.
  - o Recommendation:
    - Expand the variety of coffee and bakery options.
    - Focus marketing efforts on these categories.
- 3. Revenue by Store Location:
  - o **Insight**: The Hell's Kitchen location generates the highest revenue, while Lower Manhattan sees lower footfall.

#### Recommendation:

- Investigate customer preferences and competition around the Lower Manhattan store.
- Introduce promotional offers or events to attract customers to underperforming locations.

## 4. Customer Behavior:

- o Insight: Average bill per person is ₹4.68, and average order size is 1.44 items.
- Recommendation:
  - Upsell larger portions or bundles to increase order size.
  - Offer loyalty programs to encourage repeat purchases.

#### 5. Product Preferences:

- Insight: Hot beverages such as Barista Espresso and Brewed Chai Tea are the topselling products.
- o Recommendation:
  - Ensure consistent availability of top-performing items.
  - Offer discounts or deals on complementary products to increase sales.

# 7. Key Findings and Insights

## 1. Sales Trends:

 Sales peak during weekends and early morning hours (7 AM to 10 AM), suggesting a focus on breakfast promotions.

## 2. Product Performance:

o Barista Espresso is the top-selling product, and it can be bundled with other items to increase sales.

### 3. Store Performance:

- o The store in Hell's Kitchen generates the highest revenue.
- o Weekend sales outperform weekdays, calling for targeted weekend campaigns.

## 8. Future Steps

- 1. Incorporate advanced visualizations using Power BI to create dynamic and interactive dashboards.
- 2. Explore customer demographics to understand purchasing patterns and preferences by age and gender.

## 9. Appendix

- Github: Coffee-Shop-Sales-Dashboard
- Dashboard Screenshot:

