☕ Coffee Sales Dashboard Analysis – Excel Project Report

📌 Overview

This project presents a comprehensive Coffee Sales Dashboard created in Microsoft Excel, offering key insights into customer behavior, product performance, and revenue trends. Leveraging Excel functions, pivot tables, slicers, and dynamic visualizations, the dashboard serves as a powerful business intelligence tool to support data-driven decisions in a coffee sales environment.

I have learned the methodology and layout from the following YouTube tutorial titled "Excel Dashboard for Data Analysis - Coffee Sales Analysis" by Mo Chen, while also tailoring the design and interactivity based on personal exploration.

🔧 Tools & Techniques Used

- Excel Functions: XLOOKUP, INDEX MATCH, IF
- Data Transformation: Column creation, formatting, standardization
- Pivot Tables & Charts: Summary tables, line & bar charts
- Interactive Filters: Slicers and Timeline
- Dashboard Layout: Custom shapes, formatting, KPI visuals

⍰ Step-by-Step Methodology

Customer Data Integration

Using XLOOKUP, customer data such as names, email addresses, and country information was extracted from a separate sheet and populated in the "Orders" worksheet:

=IF(XLOOKUP(C2, customers!$A$1:$A$1001, customers!$C$1:$C$1001,, 0)=0, "", XLOOKUP(C2, customers!$A$1:$A$1001, customers!$C$1:$C$1001,, 0))

NOTE: We click the F4 key to lock the range we are selecting.

Product Data Population

Using INDEX MATCH, detailed product attributes like size, unit price, and roast type were pulled into the main dataset from the products sheet:

=INDEX(products!$A$1:$G$49, MATCH(orders!$D2, products!$A$1:$A$49, 0), MATCH(orders!I$1, products!$A$1:$G$1, 0))

Sales Calculation

Sales were computed as:

= Unit Price × Quantity Sold

Standardizing Coffee and Roast Types

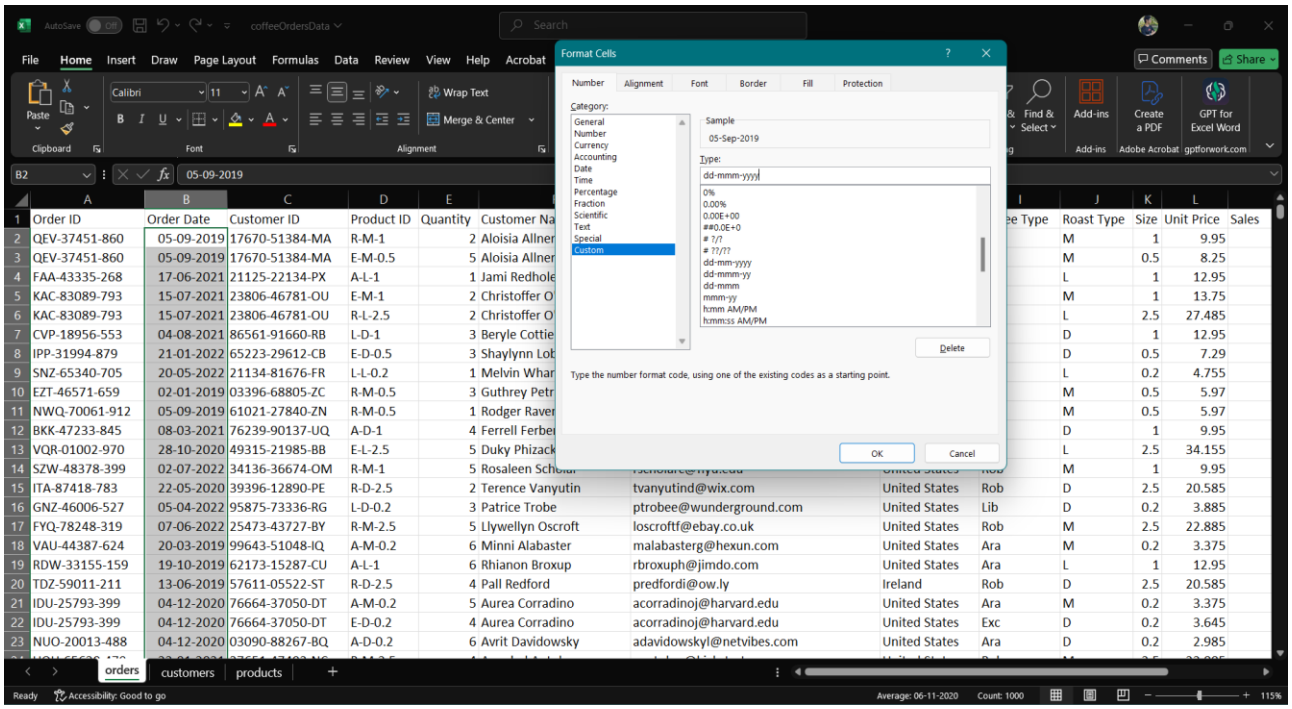
Abbreviations were replaced with full names using nested IF statements to ensure clarity in visualizations and reports:

=IF(I2="Rob", "Robusta", IF(I2="Exc", "Excelsa", IF(I2="Ara", "Arabica", IF(I2="Lib", "Liberica", ""))))

=IF(J2="M", "Medium", IF(J2="L", "Light", IF(J2="D", "Dark")))

Formatting for Readability (CTRL+1)

Date Format: Custom dd-mmm-yyyy (e.g., 05-Sep-2019)
Size Format: Custom "0.0 kg" (e.g., 1.0 kg)
Currency Format: Applied to “Unit Price” and “Sales” columns

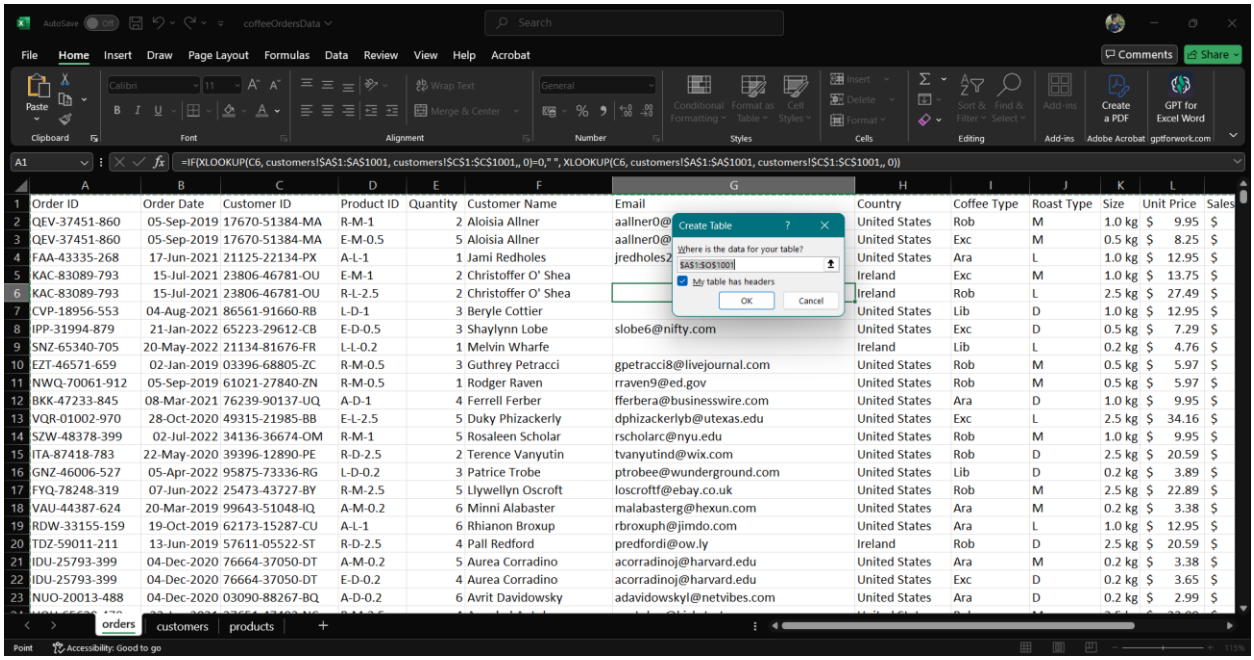


Data Cleaning

Duplicates were removed to ensure accuracy in pivot analysis.

Table Creation

The cleaned dataset was converted to a structured table named Orders using Ctrl+T, enabling dynamic updates in downstream analysis.



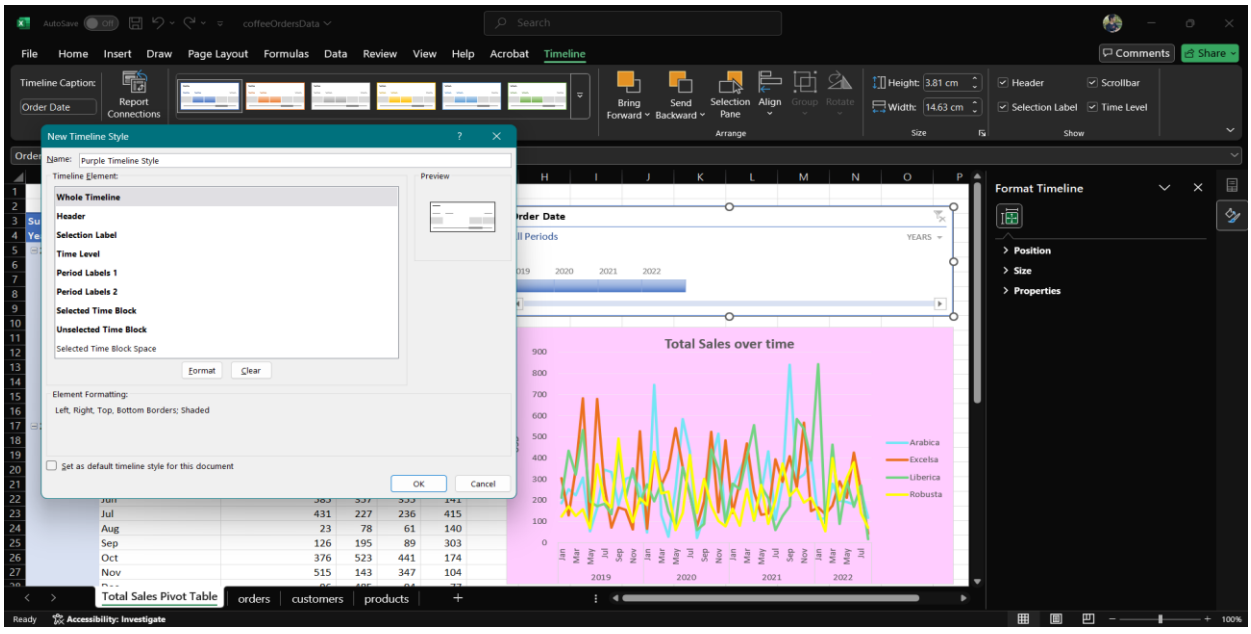
Dashboard Components

Sales Trend Over Time

A pivot table was used to group sales by year and month, segmented by coffee type. A line chart was created to visualize sales trends.

Interactive Timeline

A Timeline slicer was inserted to allow dynamic filtering of the entire dashboard by date.



Slicers for Filtering

Three slicers were added for:

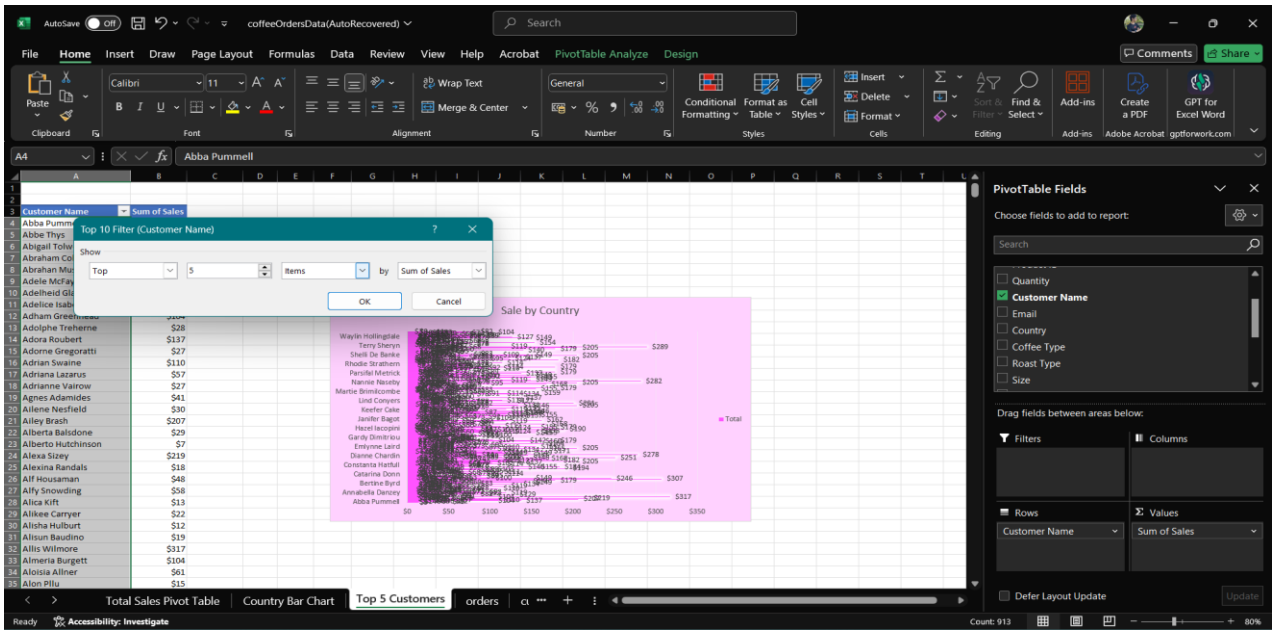
- Size
- Roast Type
- Loyalty Card Holder (retrieved via XLOOKUP on Customer ID)

Sales by Country (Bar Chart)

Pivot data was summarized and visualized using a bar chart showing total sales per country.

Top 5 Customers (Bar Chart)

Sales data was sorted and filtered to highlight the top 5 customers by revenue contribution.



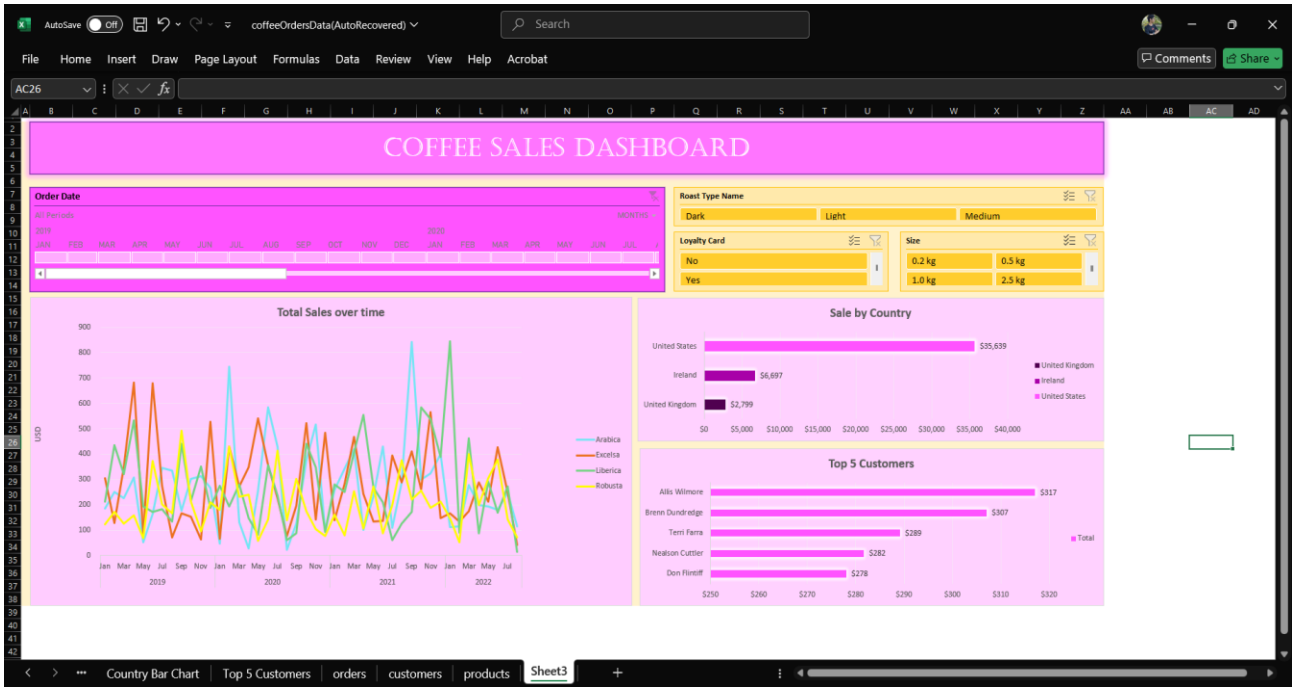
Dashboard Design

A new worksheet was dedicated to the final dashboard.

- Custom layout with minimized grid lines and resized cells for cleaner visuals.
- Strategic placement of pivot tables, charts, slicers, and KPIs.
- Color-coded headers, shapes, and elements to guide user navigation.

Key Insights

- Arabica emerged as the most sold coffee type across multiple months.
- Certain countries and customers significantly contribute to total sales. Here, the United States consumes more coffee than other countries. Similarly, Allis Wilmore buys coffee more than any other customer.
- The dashboard allows decision-makers to easily identify trends and high-performing segments.



Conclusion

This Coffee Sales Dashboard shows how Excel can be transformed into a full-featured data analytics tool through its formulas, clean data organization, and thoughtful design.