Excel Sales Dashboard Project – Full Documentation & Analysis Report

1. Project Overview

This project involved building a complete **interactive Sales Dashboard** in Microsoft Excel using real-world messy data. The goal was to simulate an end-to-end analytics workflow, including data cleaning, transformation, analysis, visualization, and dashboard design. The dashboard provides insights into sales trends, product performance, customer activity, and regional sales distribution.

The final output includes:

- A fully cleaned and structured dataset
- PivotTables and PivotCharts for analysis
- Dynamic slicers for interactivity
- Executive-style KPI cards
- A polished, user-friendly dashboard

---

2. Raw Dataset Description

The original dataset contained 30+ rows of sales transaction data with the following columns:

- Date
- Customer Name
- Product
- Quantity
- Unit Price
- Region
- SalesRep
- Notes
- Total Sales

The data intentionally included inconsistencies to mimic real-world conditions, such as:

- Mixed date formats

- Numbers stored as text
- Missing or inconsistent notes
- Text-based numeric values
- Varying delimiter styles (slashes, dashes, dots)

---

3. Data Cleaning & Standardization

3.1 Fixing Date Formats

Dates were inconsistent among formats like:

- 23/03/2025
- 11-Mar-25
- 2025.03.09
- 3/11/2025
- 15-03-2025

A new column **Date** was created using:

=DATEVALUE(SUBSTITUTE(SUBSTITUTE(SUBSTITUTE([@Date], ".", "/"), "-", "/"), " ", ""))

This converted all date variations into a true Excel date serial number.

Other clean columns were created with helper columns which were later deleted.

3.2 Numeric Cleanup

Fields like Qty, Unit Price, and Total Sales contained text-based numbers.
Recalculated **TotalSales** accurately with:

=[@Qty] * [@UnitPrice]

3.3 Creating an Excel Table

The data was converted into an Excel Table for:

- Auto-expanding formulas
- Cleaner references
- PivotTable compatibility

- Better formatting consistency

---

4. Feature Engineering

4.1 Month Column

To analyze monthly sales trends:

=TEXT([@CleanDate], "MMM")

4.2 KPI Metrics

Computed:

- **Total Orders**
- **Total Revenue**
- **Average Order Value (AOV)**
- **Sales per Product**
- **Top Product (Widget A)**

These were turned into dashboard KPI cards.

---

5. PivotTables Created

Built the following PivotTables:

5.1 Sales by Region

- Rows → Region
- Values → TotalSales

5.2 Sales by Product

- Rows → Product
- Values → TotalSales

5.3 Monthly Sales Trend

- Rows → Month
- Values → TotalSales

- Sorted by month order

5.4 Sales by SalesRep

- Rows → SalesRep
- Values → TotalSales

---

6. PivotCharts Developed

Each PivotTable was visualized using a PivotChart:

- **Line Chart** → Monthly Sales Trend
- **Bar Chart** → Sales by Region
- **Stacked Column Chart** → Region × Product

Charts were formatted with clear labels, consistent colors, and minimal clutter.

---

7. Dashboard Interactivity with Slicers

Slicers were added for:

- Date
- Product
- Region
- Customer

These slicers were linked to all PivotTables, allowing the user to filter the entire dashboard dynamically.

---

8. KPI Cards Design

KPI cards were created for:

- Total Orders
- Total Revenue
- Average Order Value

- Top Product
- Top Product Sales Value

Card formatting included:

- Large, bold numbers
- Smaller descriptive labels
- Soft background colors
- Thick borders
- Highlighting (e.g., a star next to the top-performing product)

---

9. Final Dashboard Layout

The dashboard was structured into three clean sections:

Top Section – KPI Summary

A clean row of KPI cards aligned and evenly spaced.

Middle Section – Slicers

Compact, resized slicers arranged horizontally for easy access.

Bottom Section – Charts

A combination of line charts, bar charts, and stacked column charts aligned neatly for visual clarity.

---

10. Skills Demonstrated

This project demonstrates proficiency in:

- Data cleaning (dates, numeric fields, structure)
- Excel formulas (IF, VALUE, DATEVALUE, TEXT, etc.)
- Excel Tables & structured references
- PivotTables for aggregation
- PivotCharts for visualization

- Dashboard design principles
- Slicers for interactivity
- KPI metric creation
- Layout alignment & visual consistency

This is a complete demonstration of end-to-end Excel analytics capability.

---

11. Final Deliverables

- Cleaned Excel dataset
- PivotTable analysis
- PivotCharts
- KPI metric calculations
- Fully interactive Excel dashboard
- This written project documentation