21-DAY EXCEL DATA ANALYTICS CHALLENGE

- For Beginners & Early Intermediates
- Use any of the 5 datasets given - or even more if you wish.
- Goal: Build a professional Excel dashboard by Day 21 using everything you've learned so far.

CHALLENGE OVERVIEW

In this 21-day challenge, you'll move from basic Excel operations to cleaning, analyzing, and visualizing data, finally ending with a complete interactive dashboard.
Each day's task builds on the previous one - so stay consistent.

Dataset Link: Dataset for Excel projects

WEEK 1 – Excel Foundations & Data Familiarity

Focus: Excel interface, formulas, and data basics

Day 1 – Dataset Selection & Import

- Choose any one (or more) of the 5 datasets provided.

- Import into Excel.

- Explore rows, columns, data types, and missing values.
  Task: Write 3–4 key observations about the dataset.

Day 2 – Data Entry & Formatting

- Practice editing, inserting, deleting rows/columns.

- Format headers (bold, colors, alignment).
  Task: Make your dataset look clean and readable.

Day 3 – Basic Excel Formulas (Part 1)

- Use: SUM(), AVERAGE(), MIN(), MAX(), COUNT()
  Task: Create a summary table showing total, average, and count of main numeric columns.

Day 4 – Basic Excel Formulas (Part 2)

- Use: IF(), SUMIF(), COUNTIF(), AVERAGEIF()
  Task: Write at least 3 conditions (for example, count sales above 10,000).

Day 5 – Text Functions Practice

- Use: LEFT(), RIGHT(), MID(), UPPER(), LOWER(), PROPER()
  Task: Clean and format text columns (names, cities, etc.) properly.

Day 6 – Data Validation & Cleaning Intro

- Add drop-down lists.

- Detects duplicates and removes them.

- Handle blank cells using filters or formulas.

  Task: Ensure your dataset has no duplicates and missing values handled.

Day 7 – Power Query Introduction **(Optional if Excel 365)**

- Load data into Power Query.

- Remove nulls, duplicates, replace inconsistent data.

  Task: Clean data and re-load into Excel.

WEEK 2 – Data Cleaning, Exploration & Analysis

Focus: Transformations, descriptive statistics, and exploring patterns.

Day 8 – Handling Inconsistent Data

- Use Text-to-Columns, Flash Fill, and TRIM() to fix messy data.

  Task: Split one messy column into multiple clean ones.

Day 9 – Conditional Formatting for Data Cleaning

- Highlight missing, duplicate, or outlier values.

  Task: Create color-based rules to visually flag data issues.

Day 10 – Descriptive Statistics

- Use Analysis ToolPak → Descriptive Statistics.

  Task: Generate Mean, Median, and Standard Deviation for numeric columns.

Day 11 – Filtering, Sorting & Exploring Data

- Apply multiple filters and sorts.

- Find top 5 and bottom 5 entries by value.

  Task: Present a mini report of key patterns (Top 5 performers, etc.).

Day 12 – Date & Time Functions

- Practice: TODAY(), NOW(), YEAR(), MONTH(), WEEKDAY(), DATEDIF()

  Task: Calculate age, duration, or time differences from your dataset.

Day 13 – Lookup & Reference Functions (Part 1)

- Use: VLOOKUP()

  Task: Duplicate the dataset using Vlookup function.

Day 14 – (Part 2)

- Use: INDEX(), MATCH()

  Task: Use INDEX and MATCH to fill missing values in one column by

fetching the correct data from another related table.

WEEK 3 – Visualization & Dashboard Building

Focus: Pivot Tables, Charts, and Dashboard creation

Day 15 – Pivot Tables (Part 1)

- Connect multiple tables; if possible, do data modeling.
- Create simple PivotTables.

  Task: Show total sales by region or average marks by category.

Day 16 – Pivot Tables (Part 2)

- Create simple PivotTables.
- Write a short description of 4 types of analysis (descriptive, diagnosis, predictive, and prescriptive analysis) from the insights arrived from the pivot table
- Do forecast analysis

  Group data by date, category, etc.

  Task: Create one PivotChart linked to your PivotTable.

Day 17 – Charts & Graphs (Part 1)

- Practice: Bar, Column, Pie, Line charts.

  Task: Visualize key KPIs (such as total sales or average score).

Day 18 – Charts & Graphs (Part 2)

- Create Combo charts, Sparklines, and use filters/slicers.
  Task: Add interactivity to your visuals.

Day 19 – Advanced Visualization & Storytelling

- Add titles, legends, color themes, and storytelling flow.
  Task: Arrange visuals neatly and make it presentation-ready.

Day 20 – Dashboard Design & AI Integration

- Use Quick Analysis for charts and summaries.

- Try Excel Copilot or AI Analyst for formula suggestions and insights.
  Task: Make a one-page dashboard summarizing your insights.

Day 21 – Documentation & Submission

Write a summary:

  - Dataset used

  - Cleaning steps

  - Formulas used

  - Key insights

- Screenshot of final dashboard

  Task: Submit Excel file, PDF dashboard, and documentation.

FINAL DELIVERABLES

1. Excel file (.xlsx) with cleaned data, formulas, and dashboard.
2. PDF Dashboard Export showing final visuals.
3. Documentation (Word/PDF) describing your process, insights, and learnings.

NOTES:

- You may use any or multiple datasets from the given five.
- Each day's task builds on the previous one.
- End goal: **Create a professional Excel dashboard project.**