

Modern Excel Starter Kit



Contents

0.	Introduction	2
1.	Understanding “Modern Excel”	2
2.	Five Pillars of a Successful Analytics Workflow	4
3.	Common Modern Excel Tools & Features	5
4.	Best Practices	6
5.	Next Steps & Further Learning	6
	Conclusion & Invitation	7

0. Introduction

Welcome to your Modern Excel Starter Kit, designed to help you unlock Excel’s most powerful (yet user-friendly) features for analytics. This guide serves as an accessible introduction to the tools, techniques, and best practices that can dramatically speed up and improve your work in Excel—whether you’re a beginner or looking to sharpen your skills.

Excel has evolved beyond simple spreadsheets. With Power Query, Power Pivot, dynamic arrays, Excel Tables, Python in Excel, and AI-powered Copilot, Modern Excel can transform raw data into actionable insights. Let’s dive in!

1. Understanding “Modern Excel”

• Power Query (Get & Transform)

- **What it is:** A data preparation tool built into Excel.
- **Why it matters:** Automates data cleanup so you can focus on analysis, not manual drudgery.
- **Action step:** Connect and import data from various sources (CSV, Excel, databases). Experiment with filtering, splitting columns, and handling missing values.
- **Resource:** [A tour of the Power Query Editor in Excel](#)

• Power Pivot (Data Model)



- **What it is:** A data modeling and analytics engine in Excel.
- **Why it matters:** Handle large datasets, create relationships between tables, and write advanced calculations using DAX (Data Analysis Expressions).
- **Action step:** Enable the Power Pivot add-in (File → Options → Add-Ins), load two related tables, and practice creating relationships and measures.
- **Resource:** [How to add tables to the data model in Excel](#)
- **Excel Tables**
 - **What they are:** Structured ranges in Excel that automatically expand and carry named references (e.g., Table1, Table2).
 - **Why they matter:** Excel Tables make data easier to reference with formulas, pivot tables, and Power Query. They also enable automatic formatting and dynamic expansion as new rows are added.
 - **Action step:** Convert a standard range to a Table (Home → Format as Table). Notice how it updates references automatically and try naming the table for clarity.
 - **Resource:** [Table time! Reasons to start using Excel tables now](#)
- **Dynamic Arrays**
 - **What they are:** Excel's new formula engine that automatically "spills" results into adjacent cells (e.g., FILTER, UNIQUE, SORT).
 - **Why they matter:** Eliminate repetitive copying and complex nested formulas. Your analysis updates in real time as data changes.
 - **Action step:** Use UNIQUE and SORT on a column of data (preferably in an Excel Table) to see how dynamic arrays work seamlessly with structured references.
 - **Resource:** [How to understand dynamic arrays in Excel](#)
- **Python in Excel**
 - **What it is:** A built-in Python environment within Excel (available on select channels).
 - **Why it matters:** Bring the power of Python libraries (like pandas, matplotlib) right into Excel, enabling advanced data transformations, statistical analysis, and more.



- **Action step:** Enable Python in Excel (if available). Try writing a simple Python cell to import, clean, or visualize data from an Excel Table. Look for the “=PY()” formula in the formula bar.
 - **Resource:** [How to get started using Python in Excel \(First steps\)](#)
 - **AI Copilot**
 - **What it is:** A Microsoft 365 service that uses AI to help with tasks like building formulas, summarizing data, and generating reports.
 - **Why it matters:** Copilot can jumpstart your workflows by suggesting formulas or automating repetitive tasks, freeing you for higher-level analytical thinking.
 - **Action step:** Once enabled, try prompting Copilot to generate a PivotTable summary based on an Excel Table or create a new calculated column. Refine your prompts for better accuracy.
 - **Resource:** [Copilot for Excel: How to create formulas and functions](#)
-

2. Five Pillars of a Successful Analytics Workflow

- **Identify Your Question**
 - **Key tip:** “What do I need to know from this data?” Start your analysis with a clear objective.
- **Gather & Clean Data (Power Query)**
 - **Key tip:** Use Power Query’s step-by-step transformations. Keep transformations transparent for easy troubleshooting.
- **Model & Relate Data (Power Pivot)**
 - **Key tip:** Leverage the Data Model for storing multiple tables. Build relationships and create DAX measures for advanced insights.
- **Analyze & Calculate**
 - **Key tip:** Use PivotTables or Python in Excel for deeper calculations. If you’re exploring AI Copilot, ask it to suggest formula patterns or summarize insights in plain language.
- **Present & Automate**



- **Key tip:** Build interactive dashboards using slicers and PivotCharts. Consider advanced Power Query workflows, Python scripts or Copilot prompts to automate reporting.
-

3. Common Modern Excel Tools & Features

- **Power Query Editor**

- Interactive interface for renaming columns, replacing values, merging tables, and more.
- **Pro tip:** Keep transformations step-by-step rather than in one massive step, making it easier to identify and fix errors.

- **Data Model & DAX**

- Separates data storage from analysis for better performance and flexibility.
- **Pro tip:** Define DAX measures explicitly as named measures instead of using implicit measures, enabling reuse, auditing, and further development.

- **Excel Tables**

- Automatically update references when new rows or columns are added.
- **Pro tip:** Use descriptive names for your tables (e.g., “sales_data” instead of “Table1”) to make your formulas and queries clearer.

- **Dynamic Array Formulas**

- FILTER, UNIQUE, SORT, XLOOKUP and more to simplify your worksheet logic.
- **Pro tip:** Combine dynamic arrays with Excel Tables for flexible, automatically updating data ranges.

- **Python in Excel**

- Use Python’s data analysis libraries (e.g., pandas, matplotlib) right in your workbook.
- **Pro tip:** Offload heavier data cleaning or specialized analysis to Python. Reference Excel Tables as data sources to keep everything organized.

- **AI Copilot**

- Get suggestions for formulas, data summaries, or presentations.



- **Pro tip:** Provide specific prompts to Copilot (e.g., “Generate a monthly sales growth measure using DAX,” or “Create a summary table from Table1”).
-

4. Best Practices

- **Name Your Ranges, Queries, Tables & Python Scripts**
 - A query named “sales_data” or a Python DataFrame labeled “product_analysis” is easier to track.
 - **Document Your Steps**
 - Rename your Power Query steps, include comments on your DAX measures, and annotate your Python scripts.
 - Consider a “read me” sheet for overall documentation.
 - **Keep Data & Presentation Separate**
 - Store raw data in Excel Tables or external sources, import it into Excel using Power Query, and then analyze or visualize it with Power Pivot or Python in Excel. Create dashboards and visuals based on this foundation.
 - **Practice, Practice, Practice**
 - Apply these features to real-world tasks. Integrate them step-by-step until you’re confident in each tool’s capabilities.
-

5. Next Steps & Further Learning

- **Learn DAX Basics**
 - Familiarize yourself with functions like SUM, AVERAGE, CALCULATE.
 - Explore time intelligence functions (e.g., YTD, month-over-month) for richer insights.
- **Explore Python’s Integration**
 - Experiment with popular Python libraries like pandas (for data wrangling) or matplotlib (for charts).
 - Blend Python’s power and Excel’s ease-of-use for best-in-class analytics.



- **Experiment with Copilot**

- If you have Copilot access, see how AI suggestions can reduce routine tasks.
- Train yourself to interpret Copilot's output and refine prompts for more accurate results.

- **Build a Portfolio**

- Demonstrate your expertise by participating in community challenges or leading your own online learning sessions. Document your approach and highlight the advantages of using modern Excel tools in the project.

- **Stay Connected**

- Check out stringfestanalytics.com for deeper dives into modern Excel, Python integrations, AI-driven workflows, and more.

Conclusion & Invitation

Modern Excel is your gateway to faster, more efficient analytics. By mastering Power Query, Excel Tables, Power Pivot, dynamic arrays—and now harnessing Python in Excel plus AI Copilot—you're ready to turn raw data into actionable insights.

Whether you're new to Modern Excel or exploring its advanced capabilities, you're in the right place. Keep experimenting, stay curious, and remember: the best way to learn is by doing. I look forward to guiding you deeper into Excel's analytics prowess.

Ready for the next step? Visit stringfestanalytics.com for tutorials, videos, and webinars. Let's make analytics accessible together.

