

AI FOR BUSY PROFESSIONALS

Chapter 7 – Using AI in Excel Quick Reference Guide



Understanding Your Dataset

Structure

“Describe how this dataset is structured.”

Column Meaning

“Explain what each column represents.”

Data Types & Formats

“Identify the data types and formats used in this dataset.”

Completeness

“Check this dataset for missing or blank values.”

Consistency

“Highlight any inconsistencies in values or formatting.”

Scale & Size

“Summarise the size and overall scale of this dataset.”

Structuring And Cleaning Data Using Natural Language

Organisation

- ✓ “Convert this range into a structured table.”
- ✓ “Tidy the column headers so they are clear and consistent.”
- ✓ “Organise this data so each row represents a single record.”

Cleanup

- ✓ “Remove any blank rows or columns from this dataset.”
- ✓ “Identify and remove duplicate records.”
- ✓ “Fix obvious data entry errors in this table.”

Reshaping

- ✓ “Split this column into separate fields.”
- ✓ “Combine these columns into a single ‘column.’”
- ✓ “Reorder the columns into a more logical layout.”

Standardisation

- ✓ “Standardise the date formats in this dataset.”
- ✓ “Make text values consistent across this column.”
- ✓ “Ensure numbers are stored correctly as numeric values.”

Building PivotTables Faster

1. Create a PivotTable from this table.
2. Summarise this data by category.
3. Group this PivotTable by month.
4. Change the calculation to show totals instead of averages.
5. Add another field to the rows area.
6. Move this field from rows to columns.
7. Remove this field from the PivotTable.
8. Sort the PivotTable from highest to lowest.
9. Update the PivotTable layout to make it clearer.
10. Refresh the PivotTable to reflect recent changes.

Creating Filters & Custom Sorts

Manual filtering and sorting	Copilot-assisted filtering and sorting
Requires knowledge of menus and options	Uses plain language to describe intent
Multiple steps to apply and adjust	Applies filters and custom sorts in fewer steps
Easy to miss criteria or apply the wrong order	Reduces setup errors and rework
Changes often require repeating steps	Easy to refine or reverse with follow-up prompts

“Show only rows where the status is Completed.”

“Filter this table to include dates from the last 30 days.”

“Exclude rows with blank customer names.”

“Sort the data by total value from highest to lowest.”

“Sort by region, then by date.”

Generating and adapting formulas

- 1 What formula fits this requirement?
 - 2 Create a formula to calculate this value.
 - 3 Apply this formula to the entire column.
 - 4 Adjust this formula to include a condition.
 - 5 Update this formula to handle blank cells.
 - 6 Modify this formula so it works with dates.
 - 7 Change this formula to return a text result.
 - 8 Rewrite this formula using a different function.
- 1 Simplify this formula without changing the result.
 - 2 Fix this formula so it calculates correctly.
 - 3 Explain what this formula is doing.
 - 4 Adapt this formula for a larger dataset.
 - 5 Update this formula so it does not return errors.
 - 6 Convert this calculation into a single formula.
 - 7 Adjust this formula to work in a table.
 - 8 Replace hard-coded values with cell references.

SUCCESS CHECKLIST

- ✓ Data is in a single structured table
- ✓ Headers are clear and consistent
- ✓ Formats and data types are standardised
- ✓ Formulas calculate correctly
- ✓ Filters and sorts behave as expected
- ✓ PivotTables update

Prompts for Forecasts

Asking better questions of your data

1. Describe the structure of this dataset, including key columns and data types
2. How many records are in this dataset, and what date range does it cover?
3. Which fields are numerical and which are categorical?
4. Are there any missing or blank values I should be aware of?
5. Which columns are most suitable for summarisation or comparison?

Forecast-focused prompts

- *“Extend the current trend to show a simple forecast.”*
 - *“Based on recent data, what might we expect next period?”*
 - *“If current patterns continue, what could future results look like?”*
 - *“Show a simple forecast using the most recent values”*
 - *“What is the likely direction of change based on this data?”*
 - *“Project the current trend forward for the next few periods.”*
 - *“What future outcome does this trend suggest if nothing changes?”*
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Identifying Trends

- ✓ What trends can be seen across these periods or categories?
- ✓ Are values generally increasing, decreasing, or staying stable?
- ✓ Which metrics show the most noticeable change over time?
- ✓ Are there any consistent patterns across multiple categories?
- ✓ Do any values behave differently than expected?

Comparison-focused prompts

- *“Compare actual results with this forecast and summarise the difference”*
- *“What are the key differences between these two periods?”*
- *“How does this category compare to the others?”*
- *“Highlight the most significant changes between scenarios.”*
- *“Which differences stand out most when comparing results?”*
- *How does performance differ between these categories over time?*

Interpreting PivotTables

- Are any values unexpectedly high or low in this PivotTable?
- What differences stand out between the categories in this PivotTable?
- What is the most important takeaway from this PivotTable?
- Which rows or columns contribute most to the totals?
- Summarise what this PivotTable is showing in plain language

Interpreting Charts

- Describe what this chart shows in simple terms
- Where are the highest and lowest points in this chart?
- What patterns or changes are visible in this chart?
- How would you explain this chart to someone unfamiliar with the data?
- What is the main message this chart communicates?

Data result

Observation

Insight

Excel result	Data-driven insight
Sales peaked in Q3	Sales reached their highest point in Q3 before declining afterwards
Customer count increased by 4%	Growth was steady rather than rapid across the period
Forecast shows continued growth	Current trends suggest growth may continue in the short term
Returns increased in Q4	The increase in returns may be linked to seasonal activity
Average order value rose steadily	Customers are spending slightly more per transaction over time
One category consistently underperforms	This category may require further investigation or review
Revenue growth slowed in the final quarter	Momentum appears to be reducing toward the end of the period
Regional performance varies significantly	Results differ by region, suggesting local factors may influence outcomes
New product sales increased month-on-month	Adoption appears to be strengthening over time
Costs increased while revenue remained flat	Margins may be under pressure during this period

AI AS AN EXCEL COACH

Getting Step-by-Step Guidance

“I am not sure where to start with this task.
Can you guide me step by step?”

“What should I do first to achieve this in
Excel?”

“What should I do next based on what I
have already done?”

“Can you walk me through this without
doing it for me?”

“Which option should I choose here, and
why?”

“Am I on the right track so far?”

Alternative Approaches

“Is there another way to do this that might
be simpler?”

“Can you suggest a different approach and
explain the pros and cons?”

“Is there a built-in Excel feature that could
do this more easily?”

“What is the quickest way to achieve this
result in Excel?”

“Can you show me an alternative method
and explain when I would use it?”

“Which approach would you recommend
for someone at my comfort level?”

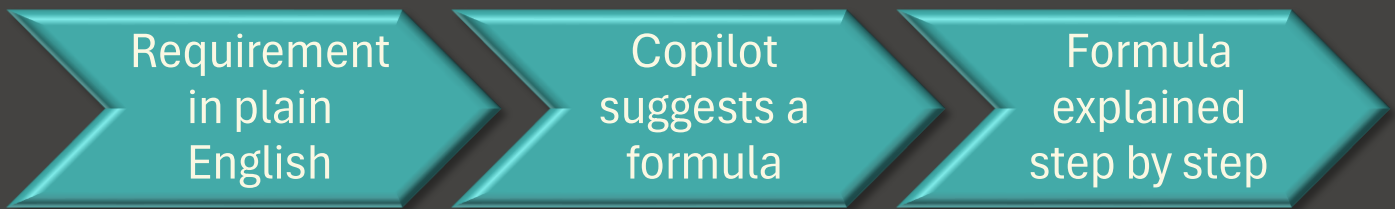
Improving Charts

- ✓ Is this the best chart type for the data I am showing?
- ✓ How could I make this chart easier to understand?
- ✓ What changes would help highlight the key message?
- ✓ Are the titles and labels clear enough?
- ✓ What would you simplify or remove from this chart?
- ✓ Does this chart communicate the point clearly?
- ✓ Could different colours emphasis this chart?

Improving Charts Layouts

- ✓ How could I improve the layout of this chart?
- ✓ Is there a clearer way to arrange the elements in this chart?
- ✓ How can I improve spacing and alignment in this chart?
- ✓ Are the title, legend, and labels positioned in the best place?
- ✓ What layout changes would make this chart easier to read?
- ✓ Is anything unnecessary in this chart layout?

Building & Explaining Formulas



Building Formulas

“I want to achieve this result. Can you help me build the formula?”

“How can I create a formula that does this in Excel?”

“What formula would you suggest for this requirement?”

“Can you help me write a formula based on this description?”

“What Excel function would be best for this task, and why?”

Explaining Formulas

“Can you explain what this formula is doing, step by step?”

“What does each part of this formula mean?”

“Why does this formula work in this situation?”

“How does this formula calculate the final result?”

“Which part of this formula should I be most careful with?”

Excel result	Copilot Troubleshooting Prompt
Calculation error	Why am I getting a #ERROR! error here, and how can I fix it?
Formula returns zero	This formula works, but the result is zero. Can you help me understand why?
Unexpected total or calculation	The result does not look right. Can you help me check the logic and references?
Formula works in one row but not others	Why does this formula work in one cell but not when I copy it down?
Chart does not reflect the data	This chart does not look correct. What should I check or change?
No error, but output seems wrong	There is no error, but the result does not make sense. Can you help me review this?