How to Choose and Plot the Right Graph

This guide helps you choose the correct graph type and ensures proper response formatting for any data visualization task. All responses must output in Markdown only — never HTML.

1. Identify the Data Type

- Categorical: → Bar / Column chart
- Numerical (continuous): → Line chart
- Distribution: → Histogram / Box plot
- Relationships: → Scatter chart
- Parts of a whole: → Pie chart

2. Match Chart Type to the Goal

Goal	Best Chart Type
Compare categories	Bar / Column
Show trends over time	Line
Show distribution	Histogram / Box
Show relationships	Scatter
Show proportions	Pie

3. Clean Plot Rules

- Label both axes clearly and include units.
- Start numeric axes at 0 when possible.
- Use at most 5 colors.
- Avoid 3D or decorative effects.

4. Focus on the Data

- One main idea per chart.
- Minimize clutter (legends, borders, gridlines).
- Highlight only key data points.

5. Verify Before Finalizing

- Does it clearly answer the question?
- Are labels, scales, and colors correct?
- Would someone understand it instantly?