Research & Analysis / Data Interpretation

Review charts and graphs for misleading axes, cherry-picked ranges, and poor color choices.
Difficulty: Intermediate
Model: GPT-4 / Claude / Gemini
Use Case: Dashboard Design, Report Review, Data Presentation
Updated: May 2026
Why This Prompt Exists
Bad charts mislead even honest analysts — and dishonest ones use them to deceive.

You get:

- stakeholders drawing wrong conclusions from misleading visuals
- dashboard that look professional but communicate poorly
- executive decisions based on truncated axes that exaggerate changes
- color-blind colleagues who can’t read your red-green charts
- reports that hide the true story because the chart type is wrong

But good charts follow rules:

- axes start at zero for bar charts (or clearly marked if not)
- color is accessible (no red-green, sufficient contrast)
- chart type matches data (time → line, comparison → bar, part-to-whole → donut/bar)
- labels are readable and complete
- no 3D effects that distort perception

Without critique, bad charts survive.

This prompt reviews your visualizations for common problems.

The Prompt

```
Assume the role of a data visualization expert who critiques charts.

Your task is to review a chart description and identify misleading or
ineffective elements.

Generate:

1. CHART TYPE ASSESSMENT
   - Current chart type
   - Is it appropriate for the data? (Yes/No)
   - Better alternative (if any)

2. AXIS CRITIQUE
   - Y-axis starts at zero? (If not, is it justified and marked?)
   - Axis labels clear and complete?
   - Any truncation that exaggerates differences?

3. COLOR & ACCESSIBILITY
   - Color-blind safe? (Red-green issues?)
   - Sufficient contrast?
   - Color used meaningfully (not just decoration)?

4. DATA INTEGRITY
   - Any cherry-picked time ranges?
   - Missing context (comparison points, benchmarks)?
   - 3D effects distorting perception?
```

```
5. RECOMMENDED FIXES
   - Specific changes to make the chart honest and clear

INPUTS:

Chart description or image description:
[DESCRIBE THE CHART — type, axes, colors, data range]

Data being displayed (summary):
[E.G., "Monthly revenue Jan-Dec 2025"]

Audience:
[EXECUTIVE / ANALYST / PUBLIC]

Purpose:
[E.G., "Show growth trend"]

RULES:
- Assume good intent (chart may be amateur, not malicious)
- Flag misleading elements even if common practice (truncated axes are still wrong)
- Suggest specific fixes, not just problems
- Note when a chart is technically correct but confusing
```

How To Use It

- Run this on every chart before it goes into a board deck or client report.
- Use it to review dashboards you inherit from previous analysts.
- For color choices, test with a color-blind simulator — this prompt catches common issues.

- Pay special attention to bar charts with non-zero y-axes — they’re the most common deception.
- Ask “what would a critical reviewer say?” — then fix it before they do.

Example Input

Chart description:
“Bar chart showing revenue by month. Y-axis from 95 to 100. Bars increase from 95 in Jan to 100 in Dec. Colors: red for months below 98, green for months above 98. 3D effect with slight rotation.”

Data being displayed:
Monthly revenue as percentage of target (100 = hitting target)

Audience:
Executive team

Purpose:
Show that we’re improving toward target

Why It Works
Most charts are created by well-intentioned people who don’t know visualization principles.

This framework improves outcomes by forcing:

- chart type assessment (right tool for the job)
- axis critique (truncation is deception)
- accessibility check (color-blind viewers matter)
- data integrity review (cherry-picking hides truth)
- specific fixes (actionable improvements)

Great visualization critique doesn’t tear down — it builds better charts.

Build Better AI Systems

Subscribe for advanced prompt engineering, AI coding tools, debugging frameworks, and practical strategies for developers and engineers.

Carefully engineered prompts for people doing real work.

Share this:

- Share on Facebook (Opens in new window) Facebook
- Share on X (Opens in new window) X

See also Statistical Output Translator