

Effective Data Visualization

Two objectives of effective graphs:

1. Grab & direct attention (iconic memory)
2. Reduce processing demands (working memory)

Graph components:

1. Geoms: points, lines, boxes, bars, etc.
2. Pre-attentive attributes: position, color, shape, curvature.
3. Non-data ink: scales, grid lines, legend, labels, etc.
4. No chart junk.

Cleveland's pattern recognition hierarchy:

1. Position on a common scale (best)
2. Position on non-aligned scales
3. Length
4. Angle
5. Area
6. Color saturation
7. Color hue (worst)

Data Viz Don'ts

1. Don't use chart junk
2. Don't make 3D plots
3. Don't use pattern fills
4. Don't use red & green together
5. Don't lie:
 - Start bar charts at 0
 - Don't cherry pick your data

Data Viz Do's

1. Annotate your charts
2. Eliminate legends
3. Show amounts with bars, dots, and lollipops
4. Show proportions with bars and waffles (not pies)
5. Show trends with lines, bars, and heatmaps

