Which Visualization? A Quick Reference

You have the following data (sample): Discrete Categories, Ordered categories, and Continuous Metrics

Here’s how to plot them

<table>
<thead>
<tr>
<th>Categories</th>
<th>Airline</th>
<th>Ordered Cats</th>
<th>Continuous Metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td></td>
<td>Class</td>
<td>Price</td>
</tr>
<tr>
<td>Alphaville</td>
<td>XeroTrip</td>
<td>Coach</td>
<td>$1</td>
</tr>
<tr>
<td>Betastan</td>
<td>YoloFly</td>
<td>Business</td>
<td>$$$</td>
</tr>
<tr>
<td>Chicago</td>
<td>ZeusAir</td>
<td>First</td>
<td>$$$</td>
</tr>
</tbody>
</table>

Discrete Categories

- **Bar (Row)**: Rows allow readable labels, while columns awkwardly turn text sideways. Compare X to Y or Y to Z; “Small multiples”. Please use this more.
- **Lollipop**: More focus on the positions of tops. Fun factor +1
- **Dot Plot**: A non-zero y-axis base may be less misleading here
- **Bar Table X,Y,Z**: Compare X to a benchmark
- **Bar Table X,Y, Delta**: Compare X to Y; Fanorler version called a ‘Bullet graph’
- **Bar (Column)**: Time moves horizontally. So use Column, not Row
- **Bar (Column) 2D Heat**: Time moves horizontally. So use Column, not Row
- **Bar Table**: Compare X to Y or Y to Z, but ordered cats + color encoding
- **Bar Line Table**: Use (above) instead. Crossings here are salient, but meaningless
- **Bar Table Price**: With two values, slope encodes differences (lines)
- **Bar (Column) Area**: Adds continuity to x-axis.
- **Bar Line Table**: Use (above) instead. Crossings here are salient, but meaningless
- **Bar Table Price**: With two values, slope encodes differences (lines)
- **Bar (Column) Area**: Adds continuity to x-axis.
- **Laplace Graph**: With two values, slope encodes differences (lines)
- **Bar Table Price**: With two values, slope encodes differences (lines)
- **Bar (Column) Area**: Adds continuity to x-axis.
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- **Laplace Graph**: With two values, slope encodes differences (lines)
- **Bar Table Price**: With two values, slope encodes differences (lines)
- **Bar (Column) Area**: Adds continuity to x-axis.
- **Laplace Graph**: With two values, slope encodes differences (lines)

Ordered Categories

- **Lollipop**: More focus on the positions of tops. Fun factor +1
- **Dot Plot**: A non-zero y-axis base may be less misleading here
- **Bar Table X,Y,Z**: Compare X to Y or Y to Z; “Small multiples”. Please use this more.
- **Bar Table X,Y, Delta**: Compare X to Y; Fanorler version called a ‘Bullet graph’
- **Bar (Column)**: Time moves horizontally. So use Column, not Row
- **Bar (Column) 2D Heat**: Time moves horizontally. So use Column, not Row
- **Bar Table**: Compare X to Y or Y to Z, but ordered cats + color encoding
- **Bar Line Table**: Use (above) instead. Crossings here are salient, but meaningless
- **Bar Table Price**: With two values, slope encodes differences (lines)
- **Bar (Column) Area**: Adds continuity to x-axis.
- **Bar Line Table**: Use (above) instead. Crossings here are salient, but meaningless
- **Bar Table Price**: With two values, slope encodes differences (lines)

Continuous Metrics

- **Pie**: Screams “Percentages”!
- **Stacked Bar (Row)**: More precise and flatter, but less screaming
- **Stacked Bar (Col)**: Stacked bars but now with X, Y, Z vib, Here XYZ might be absolute values: of a market, ABC are company % market shares
- **Waterfall**: Waterfalls are vertical stacked bars that narrate financial values in a (typically) artificially imposed ordering across fantasy-time
- **Waterfall with lines**: No legends, but directly label actual values
- **Stacked area**: Now it’s definitely continuous

Metrics: relationships to other metrics

- **Scatter**: An elegant graph, from a civilized age
- **Connected Scatter**: A scatterplot, connected into a journey over time
- **Parallel Coordinates**: Beyond 2 perpendicular dimensions. A scatterplot, connected into a journey over time
- **Map**: Maps and Roslings share the same DNA
- **Hans Rosling Scatter**: Watch Rosling’s TED talk. Take XY scatter and adds two more metrics (color and size)
- **Rosling Comet**: Show two or more X+Y history values over time

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