

Visualization Types

How to Represent Data?

Ways to Visualize Data

- 1D/Linear
- 2D/Planar
- 3D/Volumetric
- Temporal
- nD/Multidimensional
- Tree/Hierarchical
- Network

Shneiderman, Ben. "The eyes have it: A task by data type taxonomy for information visualizations." *Visual Languages, 1996. Proceedings., IEEE Symposium on*. IEEE, 1996.

1D/Linear

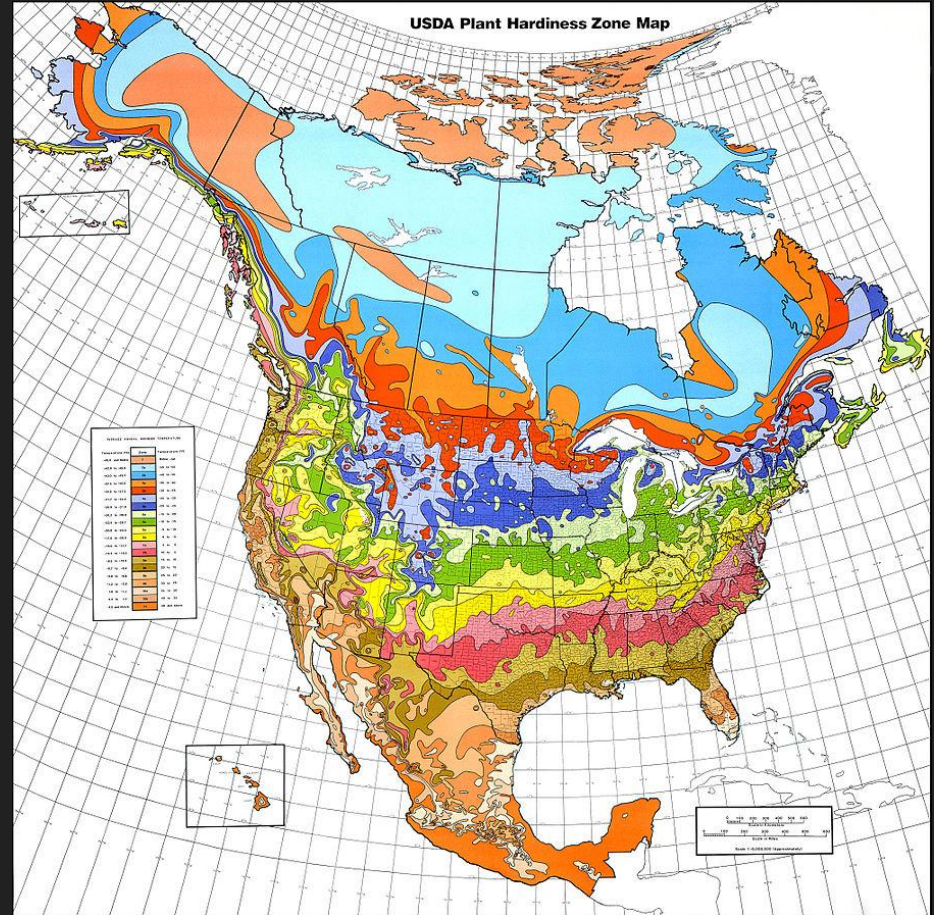
1D/Linear

lists of data items, organized by a single feature (e.g., alphabetical order)

2D/Planar (Mapping)

2D/Planar

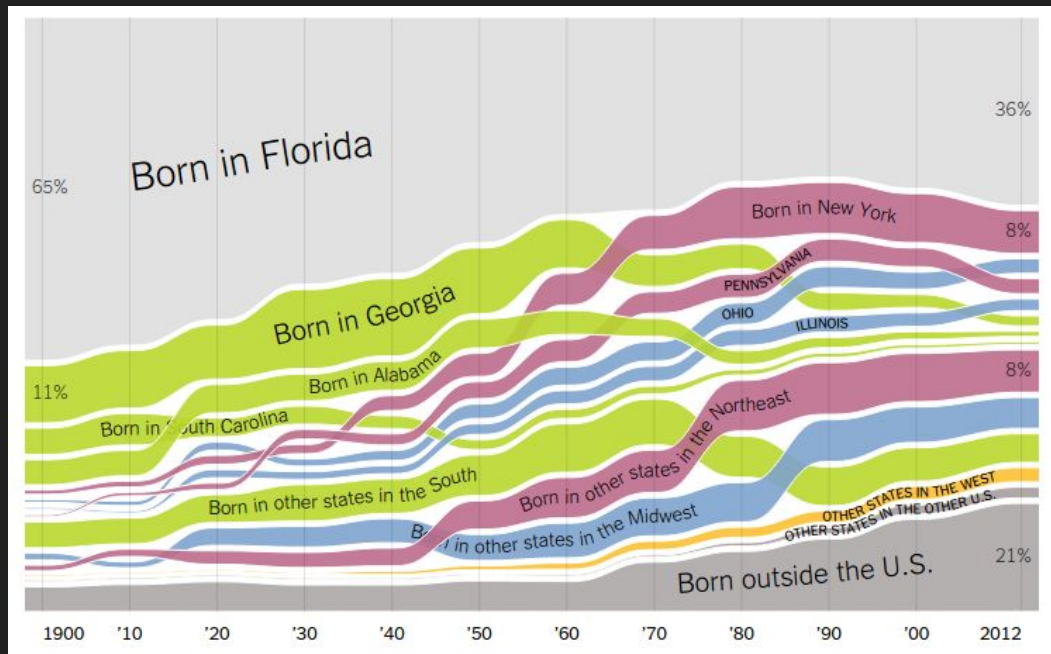
- Choropleth
- Cartogram
- Dot Distribution Map
- Proportional Symbol Map
- Contour/isopleth/isarithmic map
- Dasymetric Map
- Self Organizing Map



Temporal

Temporal

- [Timeline](#)
- [Time series](#)
- [Connected Scatter plot](#)
- [Gantt Chart](#)
- [Stream Graph](#)
- [Arc Diagram](#)
- [Polar Area/Rose/](#)
- [Circumplex Chart](#)
- [Sankey Diagram](#)
- [Alluvial Diagram](#)



nD/Multidimensional

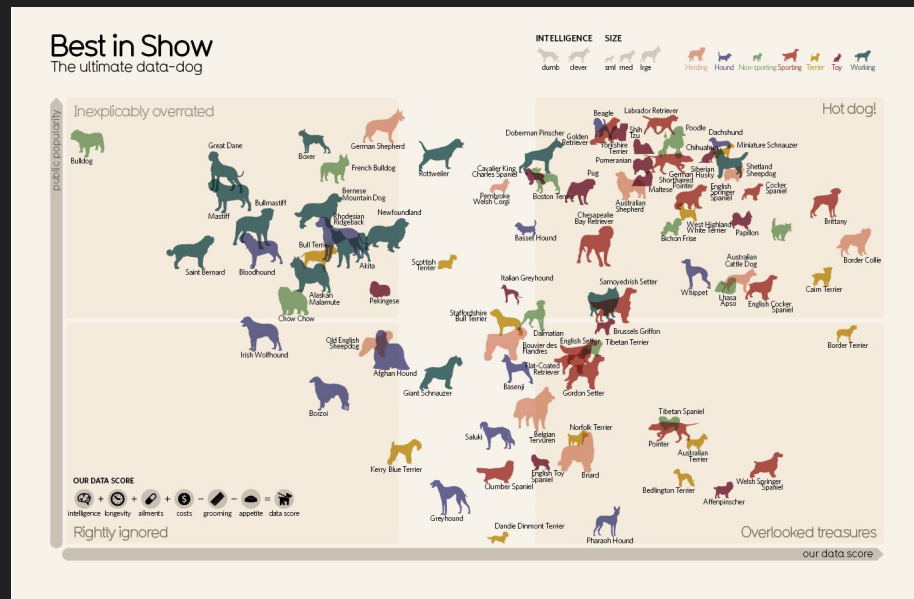
nD/Multidimensional

- [Pie Chart](#)
- [Histogram](#)
- [Wordle/Tag Cloud](#)
- [Unordered Bubble Chart/
Bubble Cloud](#)
- [Bar Chart/
Radial Bar Chart](#)



nD/Multidimensional

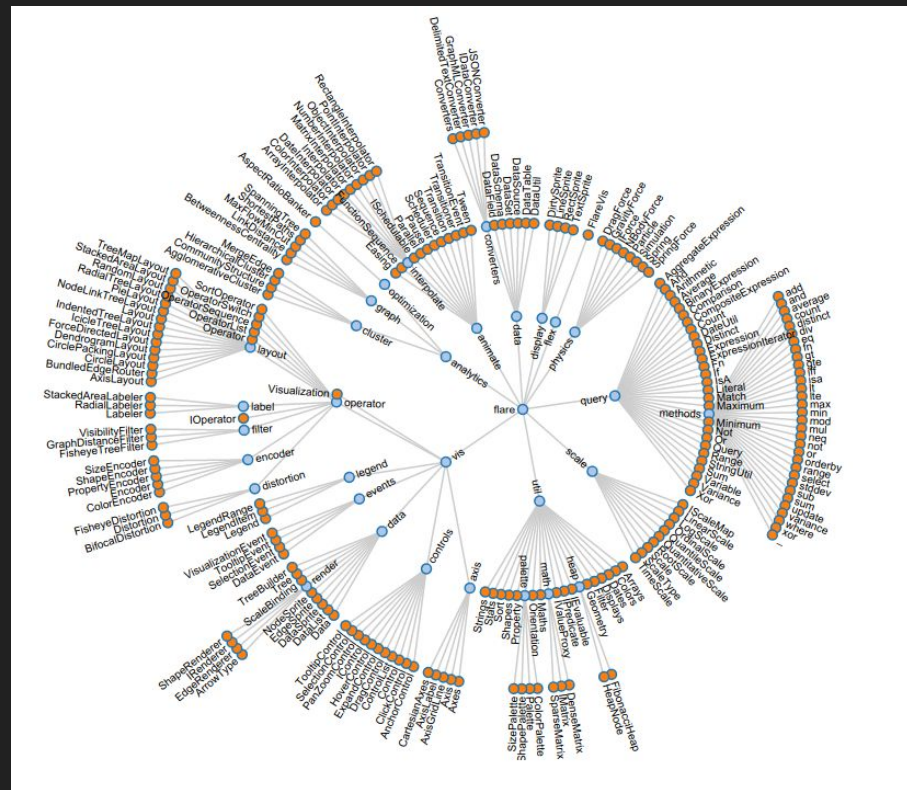
- Scatter Plot
- Bubble Chart
- Line Chart
- Step Chart
- Area Chart/Stacked Graph
- Heat Map
- Parallel Coordinates/Parallel Sets
- Radar Spider Chart
- Box and Whisker Plot/Candlestick chart
- Mosaic Display/Marimekko Chart
- Waterfall Chart



Tree/Hierarchical

Tree/Hierarchical

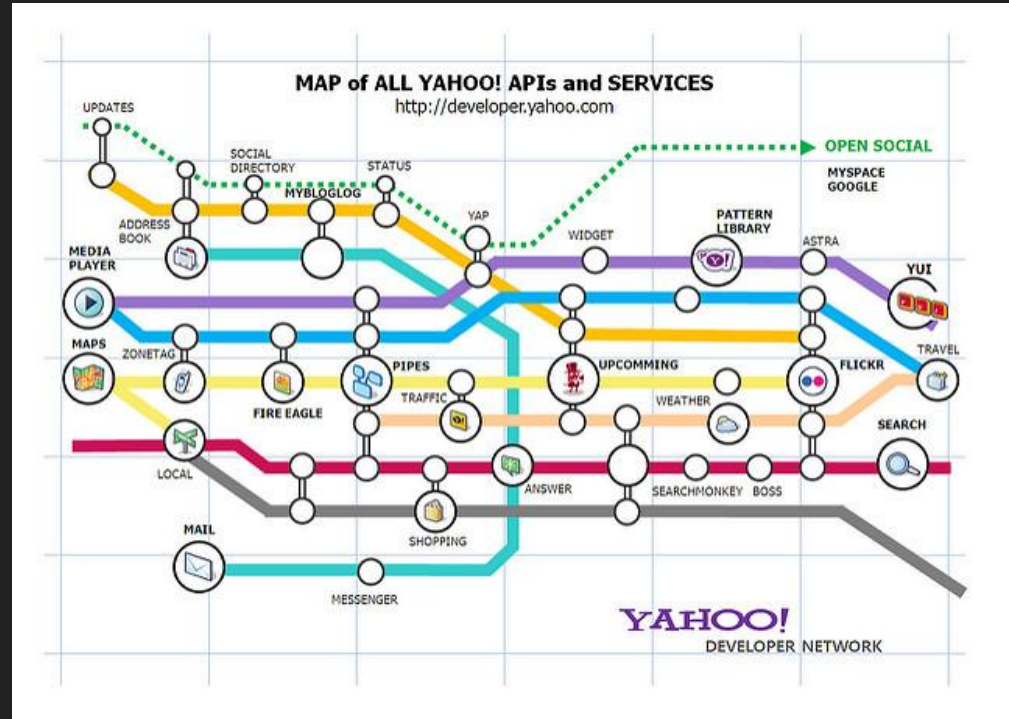
- General Tree Visualization
- Dendrogram
- Radial Tree
- Hyperbolic Tree
- Tree Map
- Wedge Stack Graph/(sunburst)
- Icicle/Partition Chart



Network

Network

- [Matrix](#)
- [Node-link Diagram](#)
- [Dependency Graph/](#)
[Circular Hierarchy](#)
- [Hive Plot](#)
- [Alluvial Diagram](#)
- [Subway Tube Map](#)



3D/Volumetric

3D/Volumetric

- 3D computer models
- Surface and Volume Renderings
- Computer Simulations

