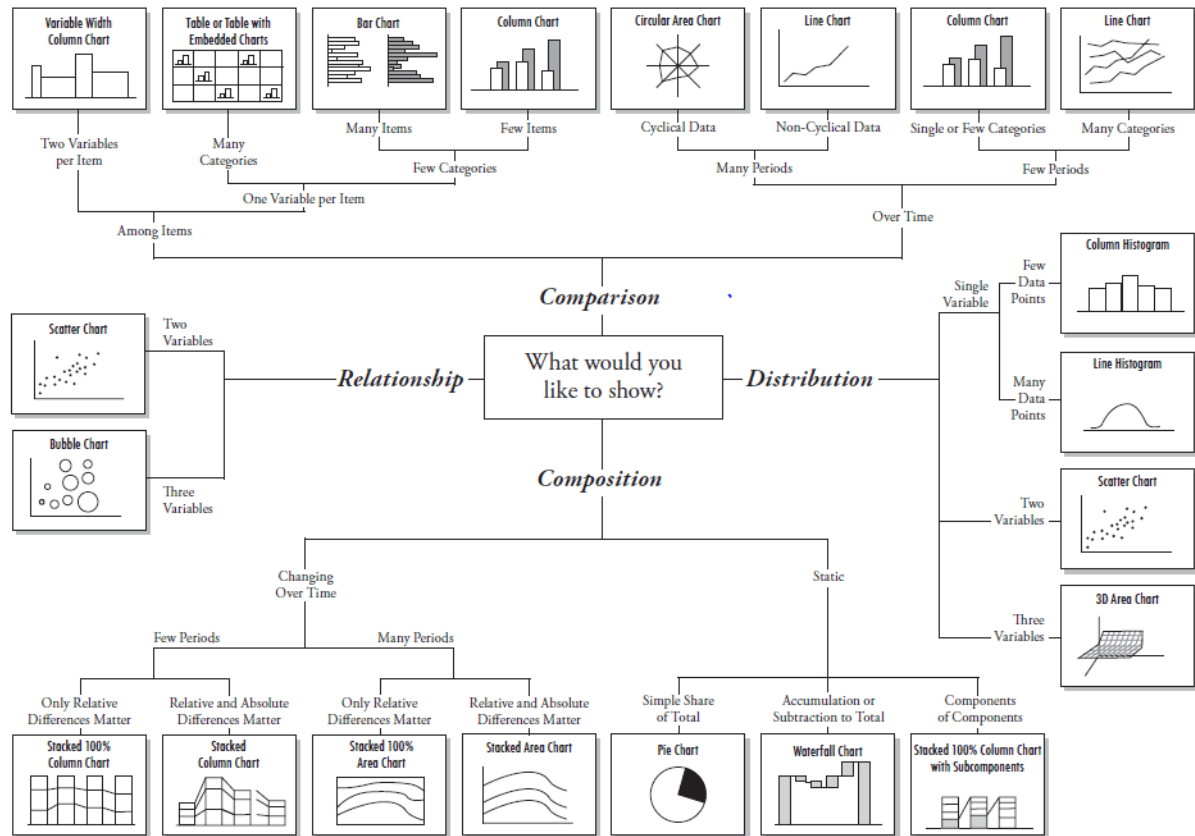# Data Visualization Cheat Sheet

Picking the Right Data Visualization

Picking the right visualization technique can be tricky. Your data could technically work well with multiple types of plots, but you need to pick the one that ensures *your message is clear, accurate, and concise*.

In general, line, bar, and column charts are good to represent change over time. Pie charts can show parts-of-a-whole, and scatter plots are nice if you have a lot of data.

To make your life easier here is a cool cheat sheet on selecting the right visualization methods from the Harvard CS-109 extension program:

Chart Suggestions—A Thought-Starter

Variable Width Column Chart
Two Variables per Item

Table or Table with Embedded Charts
Many Categories

Bar Chart
Many Items

Column Chart
Few Items

Few Categories

One Variable per Item

Among Items

Circular Area Chart
Cyclical Data

Line Chart
Non-Cyclical Data

Many Periods

Column Chart
Single or Few Categories

Line Chart
Many Categories

Few Periods

Over Time

Comparison

What would you like to show?

Relationship

Scatter Chart
Two Variables

Bubble Chart
Three Variables

Distribution

Single Variable

Few Data Points — **Column Histogram**

Many Data Points — **Line Histogram**

Two Variables — **Scatter Chart**

Three Variables — **3D Area Chart**

Composition

Changing Over Time

Few Periods

Only Relative Differences Matter — **Stacked 100% Column Chart**

Relative and Absolute Differences Matter — **Stacked Column Chart**

Many Periods

Only Relative Differences Matter — **Stacked 100% Area Chart**

Relative and Absolute Differences Matter — **Stacked Area Chart**

Static

Simple Share of Total — **Pie Chart**

Accumulation or Subtraction to Total — **Waterfall Chart**

Components of Components — **Stacked 100% Column Chart with Subcomponents**

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Pick the Right Data Visualization (Image Credits: Harvard CS-109 extension program)