

Data v Stats
etc.

Data

Data is a result of the systematic collection and storing of information, usually in machine-readable format.

Most data can be structured as a table (aka *tabular*), in rows and columns.

Data is often classified as either *quantitative* (i.e., numerical) or *qualitative* (non-numerical)

Data

Usually, for tabular data:

Each columns represents a different variable
Each rows represents a different "thing" that the
data is describing

Statistics

Statistics are summaries of data produced using numerical methods/analysis

Averages, maximums or minimums, frequency/counts

Standard deviation, standard error, quantiles, correlation

Statistics & Data

Doing any sort of analysis of data almost always requires quantitative data.

What does that mean for qualitative data?

Visualizations, Charts, Graphs

Data *visualizations* are usually based on the elements of a dataset itself

Charts/graphs are drawn from statistical summaries of data

"Data Visualization" is increasingly being used as a blanket term for both