

Data Visualization Using Spreadsheets

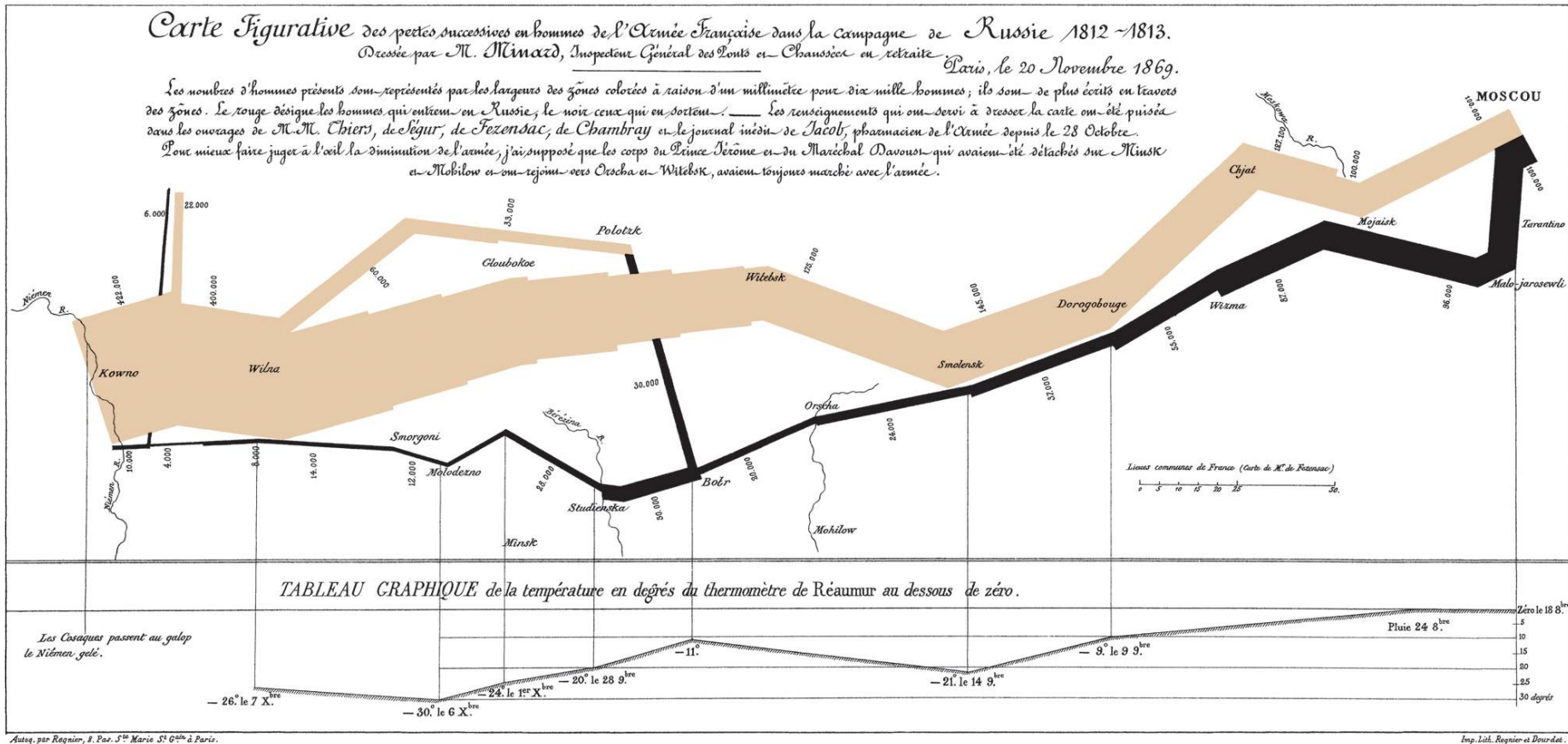
Data Visualization

“A picture is worth a thousand words”

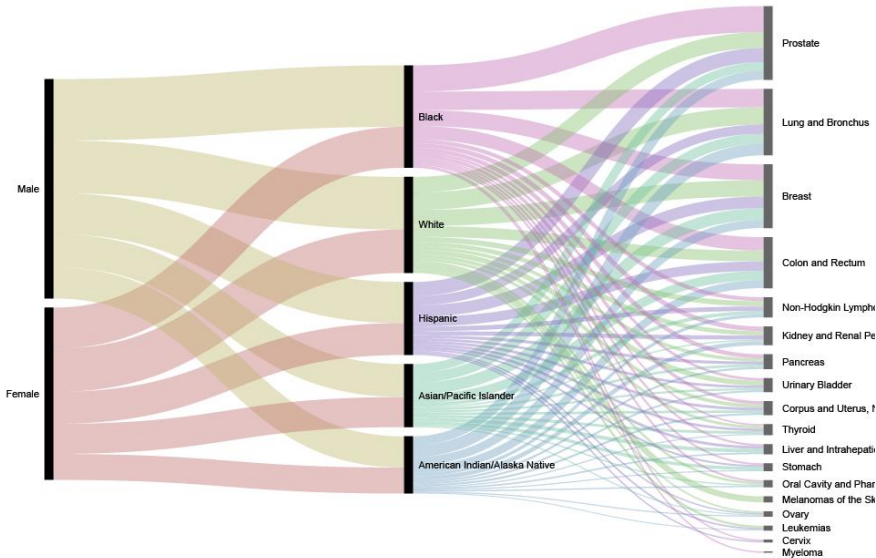
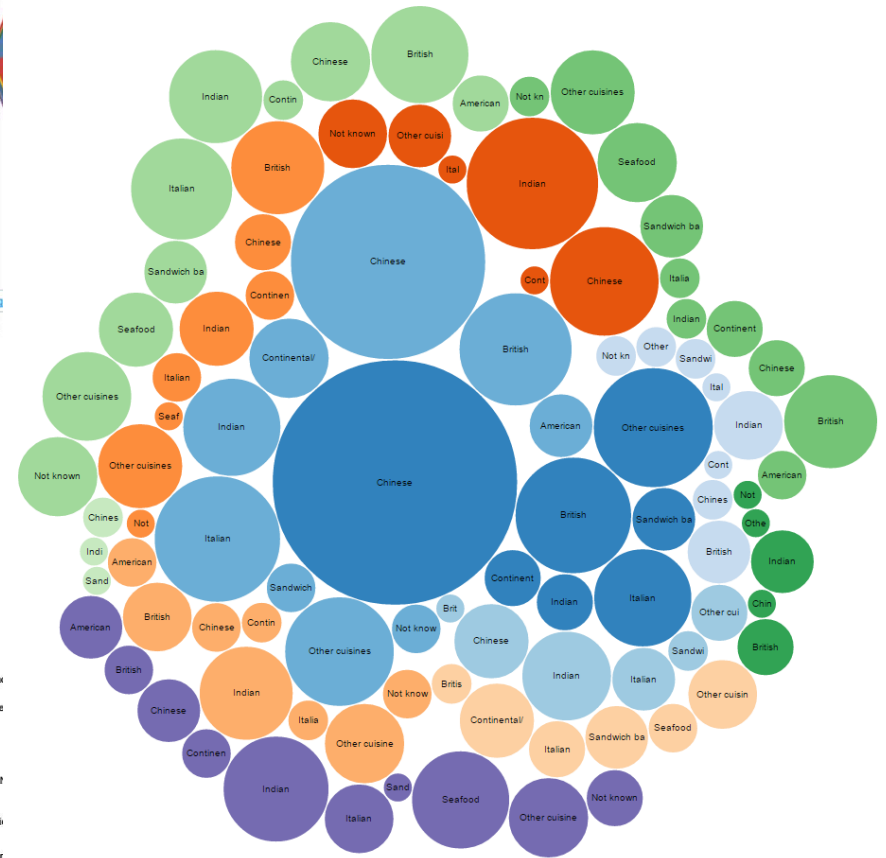
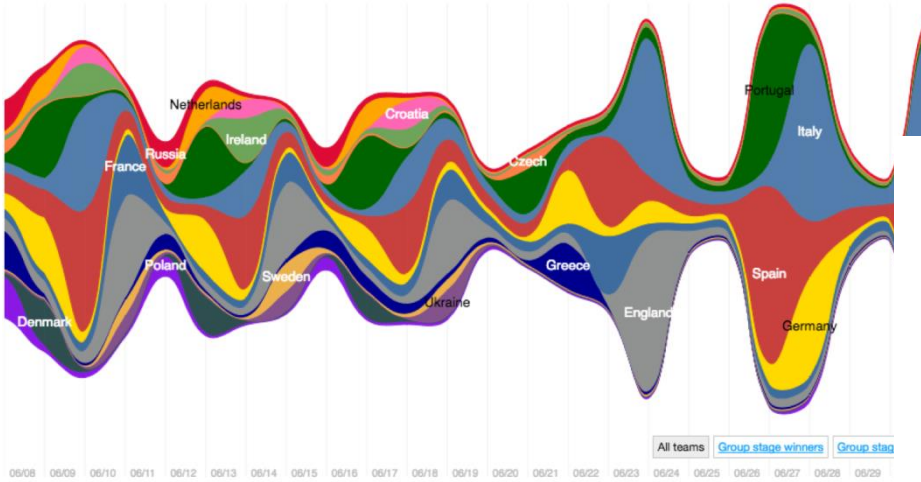
- Data visualizations can be enlightening and powerful
- Creating good visualizations is a science and an art

Early Data Visualization

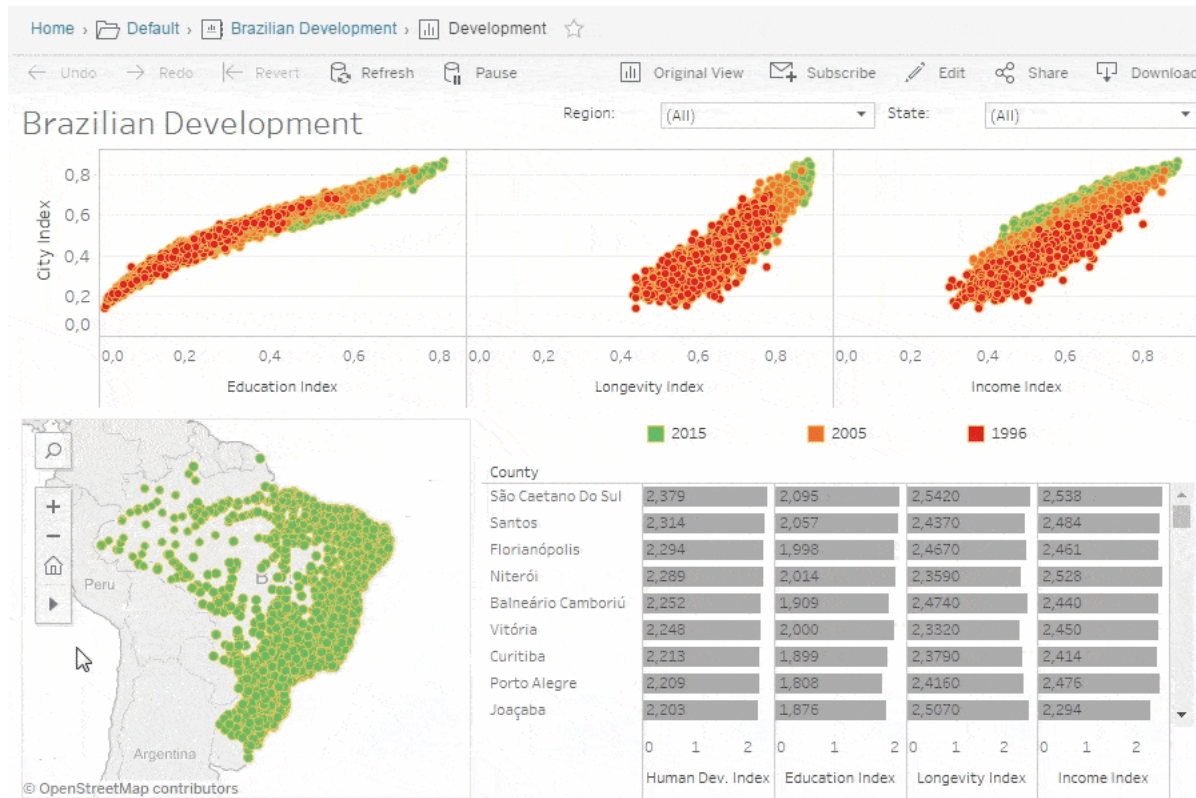
Napoleon's Army



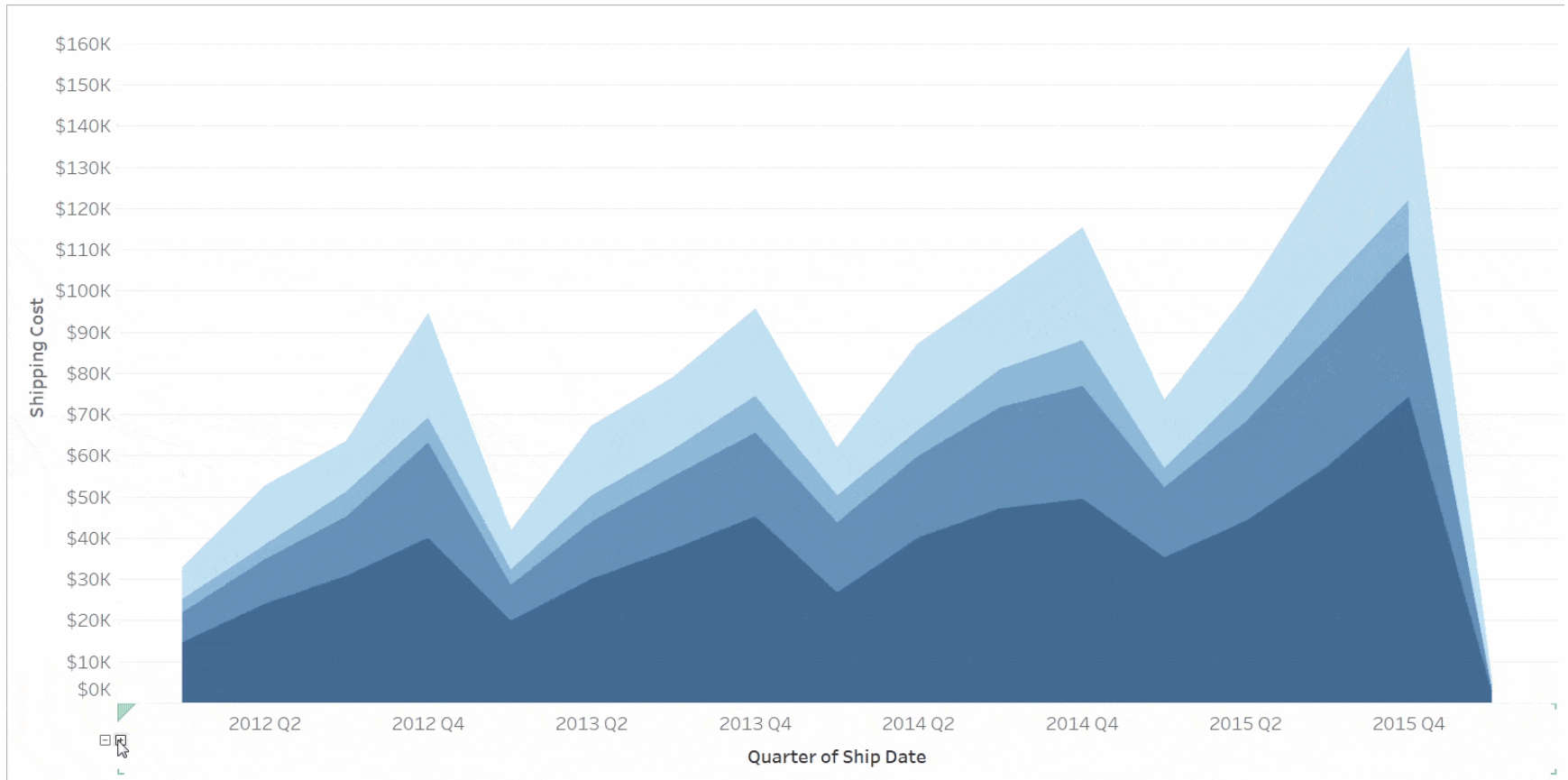
Fancy Data Visualization



The advantages and benefits of good data visualization



The advantages and benefits of good data visualization



Dynamic Data Visualization

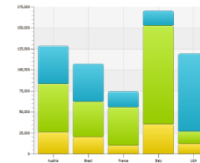
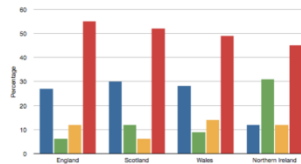


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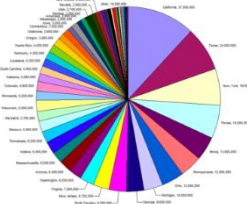
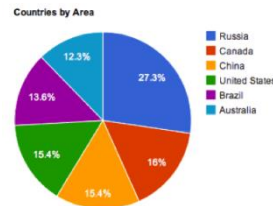
Basic Data Visualization

Don't underestimate the power of basic visualizations

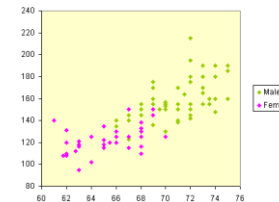
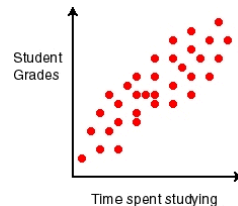
- Bar charts



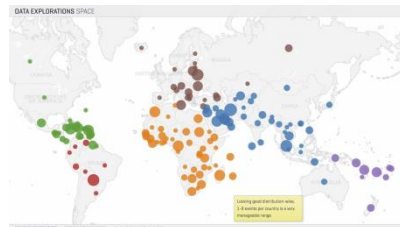
- Pie charts



- Scatterplots



- Maps



Bar Charts

When one axis is categories and the other is
numeric

Your Turn

Ten countries with the highest population, bar chart showing populations

Pie Charts

To compare relative sizes of categories

Your Turn

Pie chart showing relative number of cities with negative longitude and positive longitude

Label the two slices “west” for west of the Prime Meridian (negative longitude), and “east” for east of the Prime Meridian (positive longitude)

Scatterplots

When both axes are numeric

Your Turn

Switch to CitiesExt.csv

Use a scatterplot to explore whether there is any relationship between the latitude of cities in a country (x-axis) and the population of that country (y-axis)

Why are there lines of dots?

Area

Values by area

Your Turn

Area of Coastline countries colored by whether
or not the country is in the European Union

Data Visualization with Spreadsheets

Convenient and useful but some limitations

- Automatic inference of chart types, axes, or other features isn't always ideal
- Google Sheets has fewer features than Microsoft Excel (for now)

Though some people prefer the simplicity

For help while working with charts

- Just keep trying