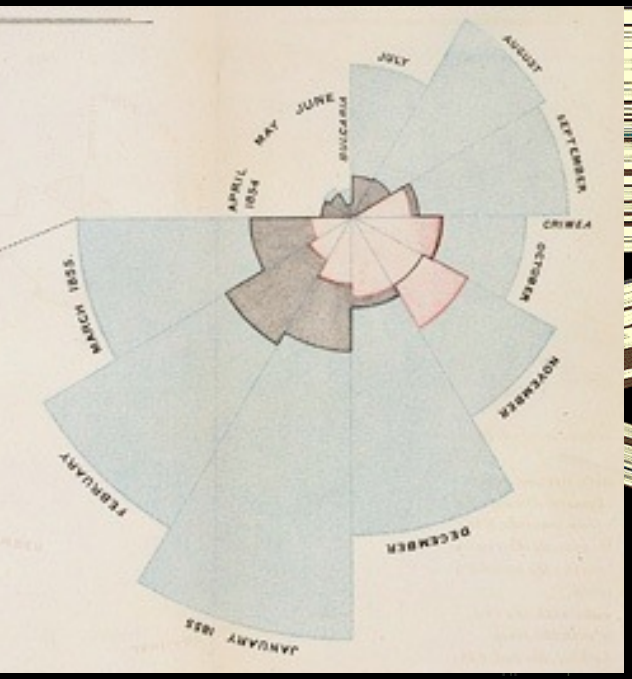
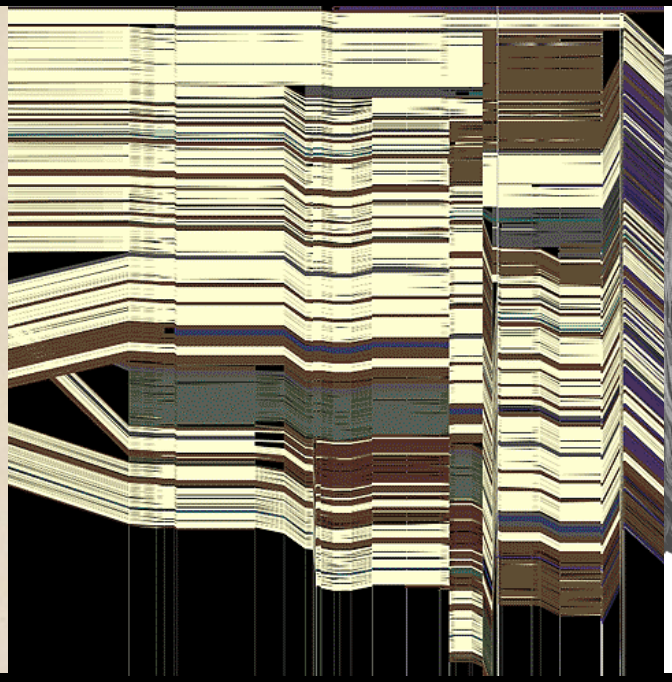
CSE 412 - Intro to Data Visualization

A1 Review





Jane Hoffswell University of Washington

A1 Submission Designs

Fields: Sunshine, Lat/Long, City, Month
Extra: Climate, Energy, Mental Health, …

Transforms: Sums, Averages, Differences, Percentages, Proportions, Filter

Chart Types: Line, Area, Bar, Scatter, Heatmaps, Maps, Radial, Compositions

Design Considerations

Title, labels, legend, captions, source!

Expressiveness and Effectiveness
Avoid unexpressive marks (lines? gradients?)
Use perceptually effective encodings
Don’t distract: faint gridlines, pastel highlights/fills
The “elimination diet” approach – start minimal

Support comparison and pattern perception
Between elements, to a reference line, or to totals

Use reader-friendly units and labels
Statistical soundness (regression, interpolation)

Design Considerations

Transform data (e.g., filter, log, normalize)

Group / sort data by meaningful dimensions

Reduce cognitive overhead
Minimize visual search, minimize ambiguity
Appropriate size, aspect ratio, legible text
Avoid legend lookups if direct labeling works
Avoid color mappings with indiscernible colors

Be consistent! Visual inferences should consistently support data inferences.

Administrivia

A2: Exploratory Data Analysis

Use visualization software to form & answer questions

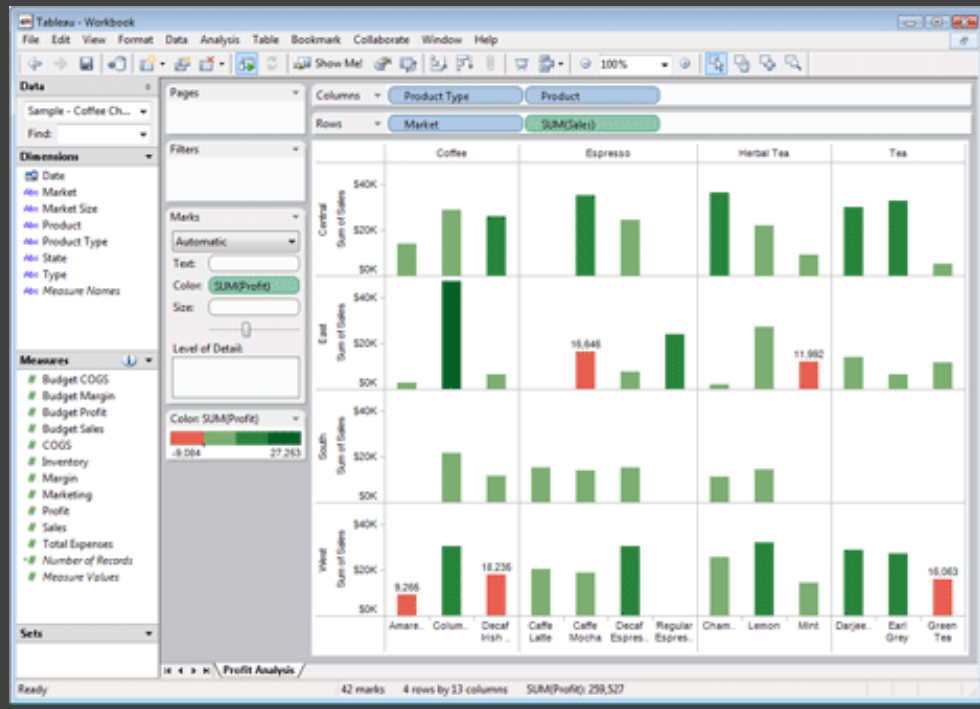
First steps:

Step 1: Pick domain & data

Step 2: Pose questions

Step 3: Profile the data

Iterate as needed



Create visualizations

Interact with data

Refine your questions

Author a report

Screenshots of most insightful views *(8+)*

Include titles and captions for each view

Due by 11:59pm

Monday, Jan 25

Course Participation & Final Project

Week 2 Participation

Week 2 Discussion Post (link to Ed)

Week 2 Quiz (link to Ed Sway)

Due by 11:59pm PST, Monday Jan 18th

Final Project Planning

Final Project Teams (3-5 people)

Team Selection Thread (link to Ed)

Proposed topics: clean energy, solar, police brutality, health

Team selection due by Friday Feb 12th