## CS 360/560: Data Visualization

Home Notes Assignments Resources

Fundamentals of visualization including data sources, representations, and graphical integrity. Visualization of scalars, vectors, and high-dimensional data. Visual perception and color theory. Applications from medical imaging, social media, sports, security and surveillance domains. PREREQ: CS 245.

## Assignment 6 - Color Scales in D3 - (100 points)

Due date: 3/7/2022 at 11:59pm

For this assignment, choose a dataset and make the following charts to get practice with color scales in  $\underline{D}_3$ .

Create a separate Vizhub for every visualization and post the links on your website. Submit a link to your website. Make sure to **name your Vizhub appropriately** 

Here are the specifications for this assignment:

To get a C (75) your assignment submission should:

• Implement a bar chart with a Sequential color scale

- The data must be read from a CSV file
- The chart must have clearly legible axis labels and tick marks
- The visualization must have a color legend associated with it that
  must be displayed appropriately. To display the Color Legend, use
  Susie Lu's d3-legend library <a href="https://d3-legend.susielu.com/">https://d3-legend.susielu.com/</a>
  (scroll down on her webpage to see some great examples).

To get a B (85) your assignment submission should:

- Complete the requirements for a C and
- Implement a <u>diverging bar chart</u> with a Diverging color scale
- The data must be read from a CSV file
- The chart must have clearly legible axis labels and tick marks
- The visualization must have a color legend associated with it that
  must be displayed appropriately. To display the Color Legend, use
  Susie Lu's d3-legend library <a href="https://d3-legend.susielu.com/">https://d3-legend.susielu.com/</a>

To get a A (95) your assignment submission should:

- Complete the requirements for a B and
- Implement a scatterplot (with 2 quantitative variables and a qualitative variable) with a Qualitative color scale
- The data must be read from a CSV file
- The chart must have clearly legible axis labels and tick marks
- The visualization must have a color legend associated with it that must be displayed appropriately. To display the Color Legend, use

Susie Lu's d3-legend library - <a href="https://d3-legend.susielu.com/">https://d3-legend.susielu.com/</a>.

To get an A+ (100) your assignment submission should:

- o Complete the requirements for an A and
- Use color scales from the <u>Colorbrewer</u> website <u>Refer to this</u> <u>example</u>
- Create a line chart with at least 4 separate lines colored using a
  qualitative color scale with the appropriate legend

## Helpful links and tutorials:

- <u>d3 documentation on color scales</u>
- Short chapter on D3 Color Scale from the "Using D3js" book
- <u>Diverging color scale interpolators built into D3</u>
- Sequential color scale interpolators built into D3

## Submitting the assignment

- For every visualization, post a link to your Vizhub sketch (mark it private, invite the TA and me as collaborators) and test it out before posting a link to it on your own website.
- Submit a link to your **website** on Canvas.

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