

Homework 3

CSC9005 : Data Visualization
April 19, 2020

1 Question 1

- In this assignment, you are asked to enhance your assignment 2 using D3 based on the new **census.csv** with area information.
- Submit your HTML/D3 code via Moodle.
- Here are four tasks to do:
 - Task 1 : Add an additional US map visualization. (8 pts)
 - Task 2 : Use 6 different visual channels (size, value, orientation, color, shape, texture) to display the population of each state in the map. (36 pts)
 - Task 3 : Keep the barchart, but allow the use to interactively select any state, and then highlight the state and its respective visualization in the map. As the user mouse over a bar representing a state, you should also have a tooltip box to show the number represented by the bar. (8 pts)
 - Task 4 : Use the area data of the US states and then redo the task (1)-(3); allow the user to select to visualize area rather than population. (8 pts)
- The design of your final product is something like this:

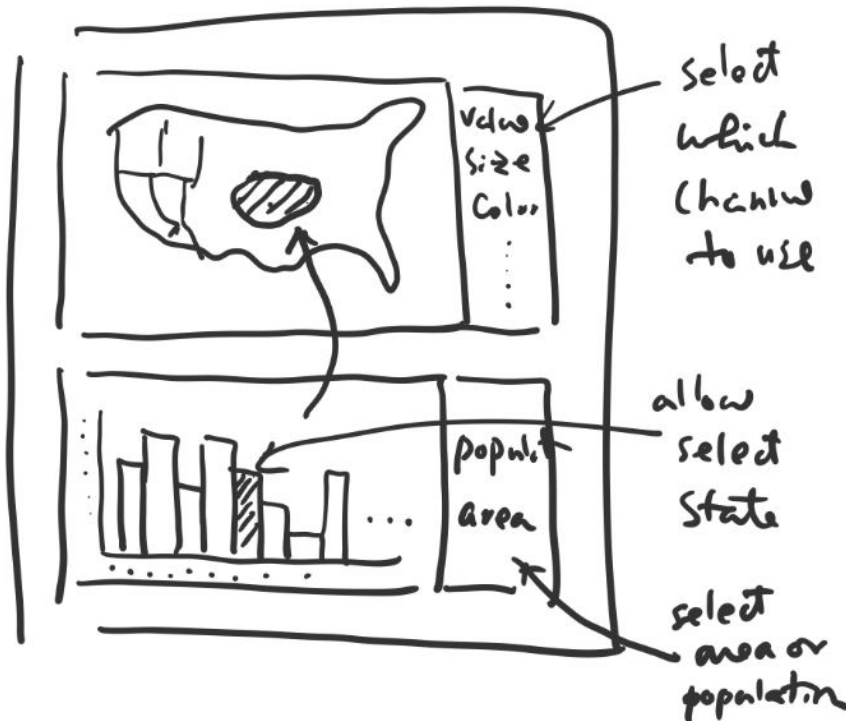


Figure 1: Possible solution of assignment 2.

- Below are some additional helps:
 - Task 1: You can find examples how to draw a US map here: [\(slides\)](#) [\(examples\)](#)

- Task 3: You can find examples how to add D3 interaction here: [\(slides\)](#) [\(examples\)](#)
- Task 2 and 4: If you do not want to write fancy user interface, you can simply use text selection and modify the visualization or data. A very simple example is **HTML - DOM.html**[\(here\)](#)
- Examples of visual channels can be found in the image below: (** Note: value means gray scale intensity, not the actual value)



Figure 2: Examples of visual channels.

- Check the class slides about the visual channels for more information. [\(slides\)](#)