

## DS4200 - Final Project

**The deadline for the final project is on Dec 10th. Each group need to present the HTML/CSS/JS file for the webpage you have designed, as well as all the files related to the website.**

You need to set up a Github project webpage for your project work and eventually publish it.

On the website, you need to include:

- An overall introduction to your project, including the topic and tasks. (5 pts)
- A paragraph to introduce the data, including the size, source and attributes. (5 pts)
- At least two links to the references. (5 pts)
- You have at least 5 data visualizations. At least 1 of the visualization is made with Altair and at least 1 of the visualization is made with D3. (5 pts)
  1. Gianni (Altair) - Brain Volume vs. Age by Dementia Status ✓
  2. Gianni - Brain Volume vs. Cognitive Function by Dementia Status ✓
  3. Wali - Age Distribution by Cognitive Status (OASIS Cross-Sectional)
  4. ?
  5. ?
- All data visualizations have clear titles, labels, legends (if needed). At least 3 of the figures need to have customized settings (color, shape, layout etc.)
- We also need a paragraph to explain the takeaway of the visualization on the webpage, and a paragraph to explain the design idea for the visualization on a separated word document. (40 pts)
- Among the 5 data visualizations, at least 3 different kinds of the interaction should be implemented.
- Interactive functions are well-explained and easy to use. The interaction functions are meaningful and can help people learn more about the data compared to a static plot. The interaction works. (20 pts)
- A summary for your findings, including what you have learned from the data visualization and what can be done in the future. (10 pts)
- Format, including correctly publish the website, no grammar error and keep the webpage tidy and clear. (10 pts)

Here are special notes for the requirement:

- We will expect the 5 data visualization to be somehow different from each other.
  - Not acceptable: 5 scatter plots
  - Acceptable: 2 scatter plots, 1 map, 1 histogram, 1 bar plot
- Think about the design of the website. The figures should relatively have similar style, including consistent color theme, title and labels.

- The five figures should not be independent. It will be great if there is a logic/relation to connect all of them. For example, from a general overview to a specific case comparison.
- In the end of the project, we will expect you to have 2-3 constructive conclusions/suggestions. Those conclusions should be corresponding to your title and your topic of the project.

In the end of the semester, you are expected to submit:

- HTML/CSS/JS to make the website
- Any other HTML figures included in the website
- Any png or other type of figure included in the website
- A Word or txt file to explain your design of the visualizations
- Python file to generate the data visualization
- D3-related(HTML/JS) to generate the data visualization
- In the Word/txt file also include the link for your published website
- The data is optional to be included