Assignment 2

Developing interactive data visualizations in React and D3js

Repository with the application templates and the dataset:

https://github.com/nicolasmedoc/IndividualAssignment

Instructions

Every student will be asked to implement two synchronized visualizations to represent multivariate data from the Housing.csv dataset:

- One scatterplot with 2D-Brush interaction to select multiple data objects (see https://d3js.org/d3-brush)
- A second visualization designed by yourself where all data objects are represented and can also be selected with 1D/2D brush interaction, or click/mouse hover interactions if more appropriate

The interactions will highlight/animate/change the selected data objects in the two visualizations simultaneously to convey useful visual patterns.

You will reuse the design patterns learned during React and D3Js tutorials:

- useState, useRef, useEffect Hook functions in React components
- Javascript classes with D3 classes separated from React components for each visualization
- global update pattern in D3 with enter(), exit() or join() functions when appropriate

You will write a short report (2-3 pages max) to describe and justify your visual design:

- by explaining how the visual encoding fits with the data properties and the user tasks
- by discussing the pros and cons of your design choices

Submission (deadline 26/11/2024)

- Commit your code in a repository on your own github account
- Don't forget to make it public
- The application showing the two visualizations will be tested by launching npm install + npm start.
- Put your report (pdf) at the root of your repository
- Put your repository URL on moodle

Rating

30% proper use of design patterns

40% application running with brushing interaction

30% design and justification in the report

Estimated time (14h)

- 2h for the visual design
- 8h for the implementation
- 4h for the report