

Lab 6

Data visualizations

DUE: April 16 before you walk in the door for class

We are going to create some data visualizations for the data in our Mongo databases for our term project. You may use either RStudio or D3.js to create your visualizations. Everyone will be responsible for creating **two** visualizations from your data. So think creatively about what your data may in fact be saying!

Part 1: Creating your datasets

Each individual must create two frontend objects that query your database for some interesting data, perform an ETL action to convert the results of that query from JSON to CSV, and then output (or otherwise offer for download) the newly produced CSV file. In other words, each frontend object must produce this transaction:

Frontend object talks to node → Node to mongo → Mongo to node → Node performs ETL

The CSV file you produce should be unique from everyone else in your group, or at least be the result of a unique query on the database. Your group can and should work together to come up with the ETL logic, though be aware that each of you may have to individually tweak that logic in order to create the specific dataset you want to create visualizations from.

Part 2: Creating your visualizations

Run the dataset through RStudio or D3.js (your choice) to produce some sort of visualization. I'll leave it up to you to select the type of visualization that makes the most sense for your datasets, but the visualizations should look nicer than the ones we did together in class. Each individual is responsible for creating two visualizations: one for each of the datasets you created in Part 1.

Part 3: Displaying your visualizations

If you use RStudio, go ahead and preload your visualizations from Part 2 onto your server. Your frontend object for Part 1 should display that image (as well as offer the CSV file like mentioned in Part 1) when the frontend object is interacted with. If you use D3.js you can also create visualizations ahead of time and preload your results onto your server, but it might be even nicer to think about how you might be able to generate visualizations on the fly, so that changes to your database can immediately be reflected in your visualizations.

Readme

As always, please provide a Readme file that details where you, both individually and as a group, had difficulty, how you overcame that difficulty, and a running log of your (individual) creativity contributions.

Grading

Part 1 (as individuals): 10 pts.

Part 2 (as individuals): 10 pts.

Part 3 (as individuals): 10 pts.

Creativity (as individuals): 10 pts.

Readme: 10 pts.

Total 50 pts.

As a courtesy reminder: If you do not show up in your repo's history (i.e., you made 0 commits), you get a 0 for the lab.