

Project

STAT 3280

Fall 2022

Due: Friday, 11/18/2022 at 5:00pm ET

Students are able to work in small groups of up to 4 people. Each group will select a type of data where available plots and visualization techniques can be greatly improved, and then attempt to come up with an effective visualization strategy that clearly communicates the desired message of the data. You have the option to choose between three project topics listed below or create your own project idea. If you choose to come up with your own problem to solve, the concept must be approved by the instructor **in writing** (via email) by 10/21/2022 at 5:00pm ET. Each group will submit **three** deliverables:

- A one page maximum write-up detailing the choice of data type, shortcomings of available plots and visualization techniques, and how your method will address these shortcomings. This should also include a summary of your proposed technique, clearly explained in writing.
- A one page maximum description of a real world data set that applies to the developed visualization technique. This should clearly explain variable types, meanings, and scales.
- A plot that shows an example of your visualization technique with the data in the above bullet point. The plot must be **static** in that you should be able to view it on a printed page without information loss.

Choose the visualization problem below of your choice, or identify a type of data where the visualization method can be greatly improved.

1. Develop a visualization to display bivariate or multivariate time series that retains relational information among the variables themselves. In other words, this should not be a time series plot where the variables are just three separate lines (points) on an xy-coordinate plane.
2. Develop a visualization to display bivariate or multivariate geospatial data that retains relational information among the variables themselves. In other words, this should not just be side-by-side maps using shading as a univariate response.
3. Develop a visualization to display bivariate or multivariate network data that retains relational information among the variables themselves. This should not just be side-by-side network graphs.

The instructor will offer the top few groups the chance to present their work in front of the class at the end of the semester. This is not mandatory, but the selected groups will receive a 10% bonus added to their project score if they accept and present.