

MATH216 HW 3—Practicing R Shiny and Leaflet

For this assignment, you will work in groups of 1-4 students to explore a data set of your choosing and create an R Shiny app to demonstrate your findings. The goal of this assignment is threefold: demonstrate knowledge of the shiny package, demonstrate knowledge of the leaflet package, and tell an interesting story about a data set through interactive graphics, maps, tables, etc. You should host your app on www.shinyapps.io, and you should submit your app by emailing me its corresponding URL. Below is some more information about the assignment and its parts.

Choosing a group: It is up to you to choose who you would like to work with for this assignment. This is a great time to meet your fellow students! If you are having issues finding a group or additional group members, please let me know. Remember that your group must contain at most 4 members.

Choosing a data set: Your group should select a data set that's rich enough to produce interesting output and analysis. It is highly recommended that your topic of analysis contains some geographical component (even if that relationship is tangential at best) so that you can demonstrate knowledge of leaflet. If you feel very strongly about a data set but do not believe it contains a mapping component, feel free to let me know. There are no other stipulations for what this data set may contain. I implore you to choose something that personally interests you and your group members. There are numerous data repositories online (such as Kaggle, the Census Bureau, etc.) that contain thousands of interesting data sets. If you are having trouble finding a relevant data set, please let me know right away.

You should create an R Shiny app that allows users to explore your data set in a curated manner. That is, you should construct interactive graphs, maps, tables, etc. that allow users to visualize the interesting trends in the data set you've chosen. Thus, your app should help tell a story about the data, and users should be able to investigate that story through the interactivity of the app. The amount of guidance you provide to the user is up to you. The due dates for this homework are:

- 1) By **Friday, March 22nd** your group must submit your proposed data set(s) so that I can approve them. In this submission, you should write a few sentences detailing your plans for analysis and what you think your app will ultimately do. These plans are non-binding and should provide a general idea of what you hope to achieve.
- 2) The final app is due on **Wednesday, April 3rd** at midnight. Please send me an email containing the URL to your final app.