An introduction to BIOF 439

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Objectives of this course

- Understand principles of good data visualization
- Know what might make a visualization poor or ineffective
- Get you going using R **for visualization**
    - Various packages
- Creating static and dynamic visualizations using R
- Using the web as a presentation medium

Course resources

Website http://www.araastat.com/BIOF439

Slack https://biof439dataviz.slack.com

RStudio Cloud https://rstudio.cloud

Homework policies

- Homework assignments will be posted on the website as well as on RStudio Cloud Friday by 9 am
- Homework assignments submissions will be based on a R Markdown file and the corresponding HTML file. These will reside in the RStudio Cloud project for that assignment. We'll be able to see and check them there. **Do not e-mail me anything**
- Homework assignments are due back to me by the following Tuesday at midnight. The instructional team will check the timestamp of the file.
- You may be late on at most 1 homework out of the 6 homeworks that will be assigned.
- Homeworks will count for 50% of your grade.

Collaboration

You are encouraged to collaborate either in person or through Slack, especially since there will be a fair amount of variability of R expertise in this class. However, your submitted work should be your own.

Final Project

- A R Markdown document or presentation
- Use your own data
- Use R package(s) to visualize your data sets in at least 3 ways, to show what your data looks like and what your analytic results look like
- Each student will be randomly assigned to 3 peers
    - Critiques based on quality and effectiveness of visualizations
- All final projects will be posted on the website, so we can learn from each other
- I fully expect some of you to blow me away!!

This will count for 20% of your grade

Class participation

- Come prepared for class
- Ask questions
- Comment on the strengths and weaknesses of visualizations when we work on them

This will count for 30% of your grade

Exemplar data

I don't work in bioinformatics anymore, or your particular disciplines. So:

- you can send me exemplar datasets by the night of the 3rd class (April 17), as well as telling me what you want to achieve
- I will try to incorporate common examples into the classes
- I will get you back completed visualizations or at least what I could achieve, on the last day of class

Contact info

Email: adasgupta@araastat.com (don't use my NED email)

Slack

Code repository

All the code and materials for this class will be stored on GitHub, which is an online version control repository. You can access it from the class website