

# **An introduction to BIOF 439**

Abhijit Dasgupta, PhD

Spring 2019

# 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](mailto: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