Prospectus

Guidelines:

Develop new, functional code that addresses at least one research question about biological or environmental systems. Your coding application should be documented in files that you share publicly on Github, with more specific requirements detailed below. You will give a short presentation summarizing the tutorial (5 to 10 minutes) at the end of the semester.

Prospectus - due by Tues Apr 1 at 12:30pm

Develop an outline of your analysis tutorial idea that includes the following (see example prospectus)...

1. An informative title

2. At least one explicitly stated research question that necessitates development of a coded procedure/analysis.

3. At least one objective stating what the code procedure is about and what the finished code will hopefully do.

4. A few statements about your intended approach/methods

5. At least 3 references from peer reviewed scientific journals related to your tutorial idea and research question(s)

My Prospectus Proposal:

1. Title

Shiny applications for determination what nearest body of water is least affected by algal and cyanobacterial blooms.

2. Research question(s)

Where waterbodies are least affected by algal and cyanobacterial blooms in Texas? Are the healthiest waterbodies accessible to large populations?

3. Objective(s)

The goals are to explain the methods and code used for building a ShinyApp that downloads and visualizes bloom data from public databases, such as the EPA, for public use.

4. Approach

I will be using various sources, including a chapter written by Wickham, to develop a functional code for building my ShinyApp for visualizing bloom occurrence.

5. Selected References

Environmental Protection Agency. (n.d.). EPA. https://www.epa.gov/waterdata/water-quality-data-upload-wqx

Water Quality Data Home. (n.d.). https://www.waterqualitydata.us/

Welcome to shiny. Shiny. (n.d.). https://shiny.posit.co/r/getstarted/shiny-basics/lesson1/

Wickham, H. (n.d.). *Mastering shiny*. Chapter 1 Your first Shiny app. https://mastering-shiny.org/basic-app.html