ESM 262 – Winter 2024

Overview

ESM 262 is an introduction to computing for environmental applications. The course provides practical training in software design best practices. Topics include programming language concepts; modular program design; data structures and flow control, version control, testing, documentation and reproducibility. The course features **R** for programming, **Git** for version control, **Markdown** for workflow, and **GitHub** for collaboration and publishing, but many concepts would be applicable in other software design tools. Class will include a mix of lectures and hands-on examples, using students' own computers.

Before each class, I will give you an Rmarkdown document to go through (You can look at both the html version and the Rmarkdown (which provides code modules)). In class we will briefly go through the Rmarkdown document, I'll answer questions and add some additional comments, then we will do an in-class exercise. Assignments will usually evolve from this exercise.

All materials will be available on Canvas.

Instructors

- Louis Graup lgraup@ucsb.edu

    office hours: Wednesday 11 AM – 2 PM

TA

- Ojas Sarup ojassarup@ucsb.edu

Class meetings

Monday & Wednesday 9:30 – 10:45 AM

Bren 1510

Assignments

There will be 8 short assignment (more or less one for each class). You will usually have time to work on the assignment in class and most will be in pairs. We'll evaluate your assignments by pulling the GitHub repository that they live in.

To set this up:

1. Create a single private git hub repo to hold all of your assignments (and nothing else!).
2. Invite Louis (louisgraup) and Ojas (osarup) to collaborate on this repo.

Then, for each assignment:

1. Put your solution, and all the files needed to run it, in its own folder within the repo.
2. Submit the URL of the folder to GauchoSpace. This will remind us to pull the repo, and give us a place to put your grade.