

## Course overview

FISH 550 – Applied Time Series Analysis

Elizabeth (Eli) Holmes, Mark Scheuerell, Eric Ward

28 March 2023

# Introductions

Who are we?

# Introductions

Who are you?

What School/Dept/Program are you from?

What are you looking to get out this class?

# Course format

## Flipped lecture format

- ▶ Videos posted of the material on the Lecture tab. **Watch before class**
- ▶ In class time will be devoted to working through hands-on exercises, R coding examples and discussing the content.

## Labs

- ▶ Group projects with teams assigned semi-randomly each week
- ▶ You will be given a dataset(s) and will come up with a group analysis to do based on the week's material
- ▶ Collaborative! Please use the discussion thread on GitHub to ask questions and share solutions with your classmates.

# Communications

We encourage lots of questions during class

Use the GitHub Discussion board

Feel free to email any of the instructors outside of class

We will respond within 24 hours

# Grading

## **Six group lab write-ups (30% of total)**

- ▶ Assigned Thurs at the end of computer lab
- ▶ Due by 11:59 PM on the Tues 12 days later
- ▶ Based on material from lectures & computer labs
- ▶ Group write-up in RMarkdown or Quarto. A template will be provided.

# Grading

**Research project & paper** (40% of total) Must involve some form of time series model(s)

**Two anonymous peer-reviews** (20% of total) One review each for 2 of your colleague's papers

## Due Dates

- ▶ Project proposal due Fri April 21 11:59pm PDT
- ▶ Project methods due Fri May 12 11:59pm PDT
- ▶ Final paper due Fri June 2nd 11:59pm PDT
- ▶ Presentations May 30 and June 1 during class time and lab time
- ▶ Peer review due Fri June 9th 11:59pm PDT

# Grading

## **Participation (10%)**

- ▶ We expect you to show up and interact
- ▶ Please contact one of the instructors if you have any conflicts



## chatGPT and Copilot

- ▶ You are welcome to use these and they can be powerful coding assistants
- ▶ GitHub Copilot is free for students but you need to use VSCode not RStudio
- ▶ chatGPT is free if you use on the OpenAI platform
- ▶ To use in RStudio, you need to use the API and that cost \$
- ▶ See the class website page for more info

## Expectations for final project

- ▶ Research paper or thesis chapter that could result in a peer-reviewed publication
- ▶ Focus on applied time series analysis (univariate or multivariate)
- ▶ Short format similar to “Report” in *Ecology* or “Rapid Communication” in *CJFAS*
  - ▶ Max of 20 pages, inclusive of refs, tables, figs, etc
  - ▶ 12-pt font, double-spaced throughout

Don't have time series data?

Lots of datasets on the class webpage: DATASETS

Or talk with the instructors (or your advisor)

# Tech preliminaries

- ▶ You will need a GitHub account and accept the invite to join ATSA-Spring-2023
- ▶ Our class repo: fish550-2023 with issues and discussions
- ▶ We will use RStudio as our IDE.
- ▶ Interacting with GitHub:
  - ▶ Option 1: Download GitHub Desktop. Very easy to use platform.
  - ▶ Option 2: Connect RStudio to GitHub.
  - ▶ Option 3: Working directly on GitHub.
  - ▶ We will help you with these steps on Thursday and will post videos.

## **Course topics**