Course overview

FISH 550 – Applied Time Series Analysis

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Introductions

Who are we?

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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. 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)

Course topics