

POLI 502 Methods of Political Analysis

2024 FALL

DR. HOWARD LIU

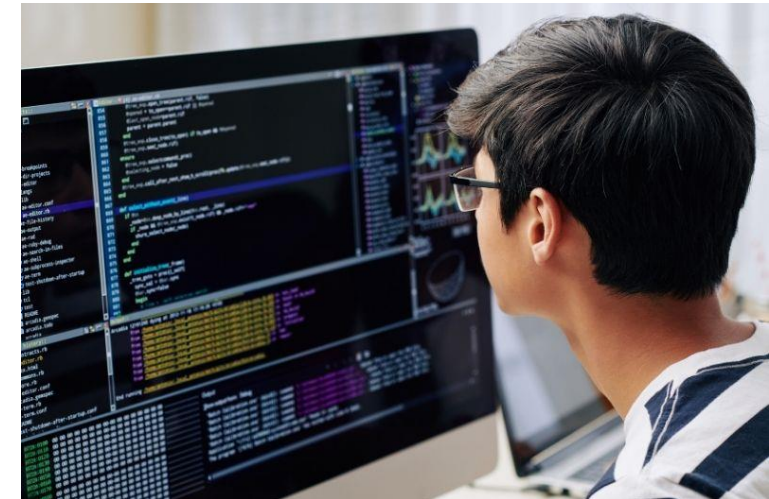
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Welcome!

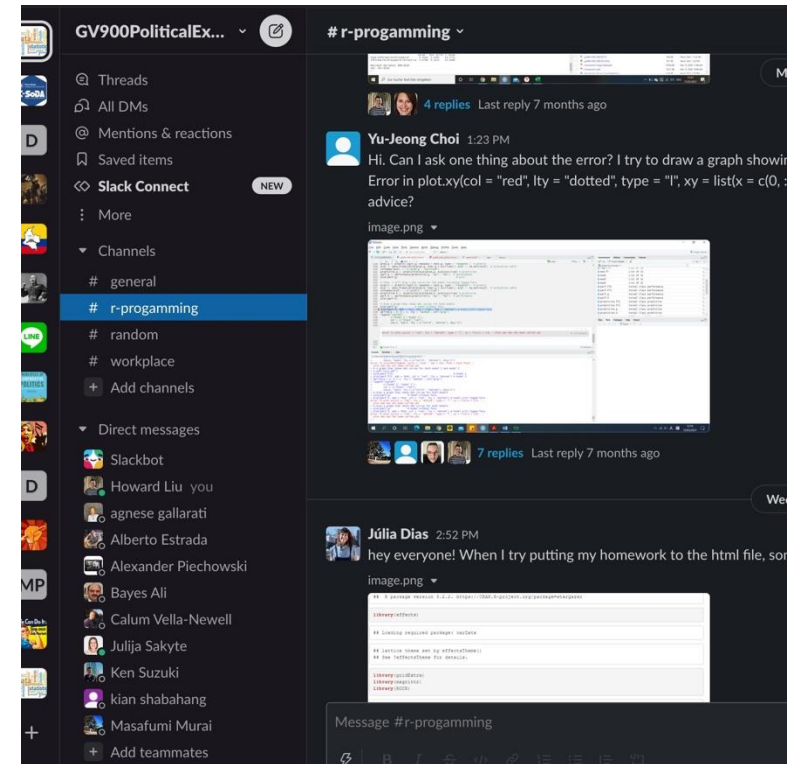
Module Objectives:

1. Become a good political science knowledge “consumer”
 - Read, understand, and evaluate **statistical analyses** published in PS journals
 - Acquire the basics statistical knowledge to become a future data scientist
 - Be able to take more advanced modules
2. Become a good political science knowledge “producer”
 - Be able to conduct rigorous quantitative analyses/research
 - Be familiar with basic statistical models
 - **Feel comfortable analyzing data in R**



Class Structure

1. Lecture: ~1 hour lecture
 - Teach basic knowledge on research design and statistical concepts
2. R session: ~1 hour programming session
 - Teach R programming step by step
 - Answer programming questions
 - Will likely have extra support hours before exams
3. **Slack:**
 - We don't use email to communicate. Use Slack.
 - Post questions on Slack. Either I or TA or other students will jump in answering
 - Students who answer questions more than 15 times, will receive 10 extra points in their final exam, which is a lot.
4. Office hours: Appointment-based



Schedule

Week 1-2 Introduction and logistic

Week 3 Scientific studies overview (quantitative approach)

Week 4 Evaluating theories of politics

Week 5 Measurement

Week 6 Probability I: The basic

Week 7 Probability II: Random variables and distributions

Week 8 Probability III: Central Limited Theorm

Week 9-10 Inference & Hypothesis Testing (bivariate)

Week 11 Inference & Hypothesis Testing (multivariate) ...

Schedule

Week 13: Interactive model in regression

Week 14: Nonlinear model in regression

Week 15: Predictive model in regression

Logistics

1. Book (FPSR): The Fundamentals of Political Science Research (Kellstedt and Whitten 2018)

- 1st or 2nd edition may work

2. Install R and RStudio on your computer

- Mac: <https://www.youtube.com/watch?v=1PsPfMaLWSk>
- Windows: <https://www.youtube.com/watch?v=9-RrkJQQYqY>

3. Install Latex on your computer

- Mac: https://www.youtube.com/watch?v=nUuW_8Hy1qA
- Windows: <https://www.youtube.com/watch?v=kSN-gS4SIqc>

Logistics

3. Advice: Google is your best friend

- **StackOverflow** (Q&A platform for programming): <https://stackoverflow.com/>
- I would advise you to Google before you ask questions on Slack
- Now, sometimes ChatGBT may triumph

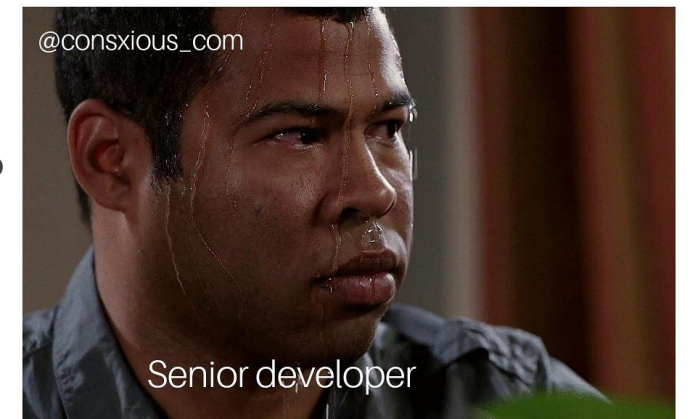
4. **Slack as our main mode of communication:** (join by next week)

- Install tutorial: <https://slack.com/help/articles/207677868-Download-Slack-for-Mac>.
- Everyone can ask; everyone can answer
- ~~A TA and I will monitor Slack regularly, and you should do the same~~
- You can email me “if” you have time-sensitive matters. For everything else please goes to Slack.

I heard he can code
without Stack Overflow



When stackoverflow is down...



Plagiarism

Plagiarism in essay writing

- Uses other people's words or the same pattern of words without referencing

Plagiarism in computing codes

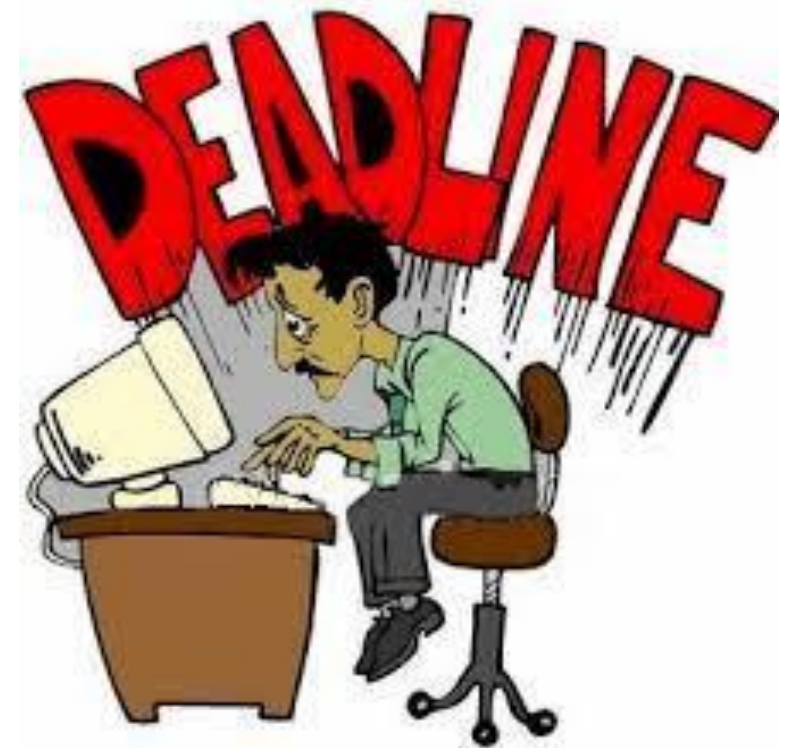
- What's okay to do:
 - Work with your classmates but **submit your own independent work** (code structures and comments are all independent)
 - **Don't allow others to copy your code** because you will be penalized too
- What's not okay to do:
 - **Copy and paste codes from your classmates (I, and text similarity programs I use, can tell by reading the code and repetitively seeing exactly same errors)**
 - Simply add a few words in the code comments
 - Simply change an object name from x to x1
 - Suspected cases will be notified and sent to the Academic Offenses Office
 - **2020-2022: 38 individuals, 13 penalties**

Assignments and Grades

- Weekly homework submission: pass/fail
- Take home midterm: on syllabus
- Take home final: on syllabus
- Attendance (10%), Weekly homework (20%), Midterm (30%), Final (40%).

Late Submission Policy

- Don't be late. Don't write your code in the last minute.
- Don't accept late submissions more than a week.
- If your submission is later than a week, your mark will be deducted by 10% per day.



Slack and Support Hours

- Slack ethics:
 - It eases our communication, but don't abuse it: I will reply within 24 hours.
 - Students who help answer questions will get extra credits (>15 times, or every week), so do engage with others.
 - If you are helped, help others too: It's how a coding community works.
 - Students can't ask help on the midterm and the final. They should be independent submissions.
 - Respect others' time and show appreciation.
- TA support hours:
 - TBD



Homework for the First Week

Complete the survey here:

<https://forms.gle/3tMwiH87AXLD6UTW6>

Get R, Rstudio, and Latex installed and ready to be used

Join and say hi  on our Slack channel

Email/Slack etiquette: You can just call me Howard, or at least call me Howard

→ Finish the above by the start of next week class

Homework for the First Week

Enjoy the fun in this class!