Bayesian Data Analysis

Syllabus (Version Jan 19, 2024)

Course Description


Instructor

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Office hour

Mondays 12:30 - 1:00p, Hill Center 404; Fridays 11:30a - noon, Zoom (access via Canvas)

Prerequisites

Some probability and statistical inference at the graduate level, calculus and linear algebra. Prior experience with R programming is strongly recommended.

Evaluation

Homework assignments (40%), final assessment (50%), and instructor’s discretion (10%).

Textbook


Homework Assignments

Homeworks problem are assigned weekly at the beginning of each week, due at 9pm on Sundays. As an important part of the learning process, each week we will devote some class time, typically on Mondays, to discuss the previous week’s homework. You should come to class prepared to discuss your solutions. In addition, each week I may call on a random panel of students to demonstrate and explain their solutions in front of the class.

Your meaningful participation in the homework discussions forms the basis for your assignment grades. No more than twice during the semester, if for any reason you are not able to prepare for a particular week’s homework or participate in the discussion, you may let me know
before class begins so that I know not to call on you. (In other words, you get two “passes.”) You cannot use your two “pass” during weeks for which you’re assigned to the student panel.

Final Assessment

Every student either takes a final exam or completes a research project to fulfill the final assessment of the course. The presumed assessment format for undergraduate and master’s students is a final exam. The presumed assessment format for PhD students is a research project. If you are interested in undertaking a final assessment of a format that is other than the presumed type for your role, please get in touch with me as I welcome such discussions (so long as they take place in advance).

Canvas and Remote Course Access

Canvas (link at top) is the main channel of communication for this class. Please check Canvas regularly for updates. In particular, you should make sure that Canvas announcements reach you via e-mail in real time.

Academic Integrity

Cheating undercuts the whole enterprise of education, academics, and science. If I were to cheat in my own work it would end my career. I take academic integrity very seriously and do not hesitate to refer cases to the Office of Student Conduct. Violations include: cheating, fabrication, plagiarism, denying others access to information or material, and facilitating violations of academic integrity. The university’s policy on Academic Integrity is available at https://nbprovost.rutgers.edu/academic-integrity-students.

Policy on the Use of Artificial Intelligence (AI)

Unless otherwise specified, the use of extractive AI, which helps find and present existing information, is permitted for homeworks, open-book examinations, research, as well other studying activities related to this course. Types of extractive AI use include searches conducted via Google and Google Scholar; StackExchange; Wikipedia; Rutgers Libraries, etc. Note that when you search and utilize information from an external source, proper citation should always be practiced in order to avoid plagiarism.

On the other hand, the use of generative AI, which creates new material on one’s command, is prohibited at all times. Types of generative AI include (but is not limited to, as the science runs its course) ChatGPT, Bard, or similar large language model-based services.

Relevant Student Services

Please visit the Rutgers Student Tech Guide, https://it.rutgers.edu/technology-guide/students/, for resources available to all students. If you do not have the appropriate technology for financial reasons, please email Dean of Students deanofstudents@echo.rutgers.edu for assistance. If you are facing other financial hardships, please visit the Office of Financial Aid at https://financialaid.rutgers.edu/.
CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professionals within Rutgers Health services to support students’ efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community, and consultation and collaboration with campus partners.

Report a Concern  http://health.rutgers.edu/do-something-to-help/

Violence Prevention & Victim Assistance (VPVA)  (848) 932-1181, 3 Bartlett Street, New Brunswick, NJ 08901, https://www.vpva.rutgers.edu/
The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services  (848) 445-6800, Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854, https://ods.rutgers.edu/
Rutgers University welcomes students with disabilities into all of the University’s educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: https://ods.rutgers.edu/students/documentation-guidelines. If the documentation supports your request for reasonable accommodations, your campus’s disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible.