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Applied Research Methods II

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Course Information
Abbreviation: GOV 355D
Unique Number: 38115
Time: Monday 1-4pm
Room: PAR 208
Flags: Writing
Flags: Independent Inquiry
Website: canvas.utexas.edu

Research Lab Information
Innovations for Peace and Development
Lab Location: RLP 4.600
Lab Access Code: Ask the instructor
Website: www.ipdutexas.org

1. Course Description

This course is the second semester of a two-semester program that attempts to provide undergraduate students with a comprehensive introduction to the research process in the social sciences. As part of this program, students attend regular classes, write their own first-rate quantitative research paper, and gain internship experience with Innovations for Peace and Development (IPD). Students are required to take both semesters of this two-semester, interdisciplinary research program.

During the first semester, the classroom part of the course covered the essential elements of applied social science research, including arguments, concepts, measures, causality, and basic statistics. Given that knowledge of statistical software, text editors, reference management software, and mapping software is increasingly helpful for success in the social sciences, the course also provided training in R, LaTeX, and `Mendeley`. At the end of the first semester, students completed their own well-developed Research Designs in lieu of a final exam.

During the second semester, classroom instruction covers experiments, data structures, data cleaning, hypothesis testing, measurement challenges, linear regression, as well as the basics of panel data, regression discontinuity designs, difference-in-differences, synthetic controls, logistic regression, and network analysis. Training in the above software programs continues during the second semester as well, and we also spend time learning Stata. By the end of the second semester, students complete their own research projects, write-up their results in a formal paper, and present their findings to the class.

2. Course Requirements

2.1. Prerequisite Coursework

Students need to have already taken Applied Research Methods I (Research Practicum, Semester 1) to enroll in this course. The instructor will not any grant exceptions.

2.2. Required Software and Resources

This course makes use of `Stata`, R, LaTeX, and `Mendeley`. Prior knowledge of any of these software programs is not required. I will teach you the basics of all of these programs during the course.

- R. For instructions on how to freely download R and its companion program, R `Studio`, consult here.
- LaTeX. Windows users can freely download MiKTeX here. Mac users can freely download MacTeX here. Advanced users may want to consider downloading SublimeText, to be used in combination with Sumatra PDF (instructions here). In class, we will be using Overleaf, a program that allows users to use LaTeX online—that is, without the need to have it installed on one's computer.
- `Mendeley`. This reference management software program is freely available here. After learning how to use `Mendeley`, or one of its competitors, such as `Zotero` or `EndNote`, it will never be necessary to construct your own bibliography manually ever again.
- `Stata`. Although `Stata` is a relatively expensive commercial software, as a UT student you have free access to `Stata` through the UT Austin Stats Apps Server as well as numerous computer labs on campus. The IPD lab (BEL [Stadium] 214), which you have access to as part of this class, has `Stata` as well.

To get help with these programs and others, there are two resources that we will utilize:

- *Data Camp*. I have signed up our class for *free* courses from Data Camp. It is an online platform that provides hundreds of courses to learn new skills. The courses are interactive and fun. We will be using some of these courses from Data Camp as required homework. Overall, students will be able to use 900 free hours of coursework.
- *Lynda*. You can also access free courses through UT-Austin's Lynda Portal.

2.3. Readings

Students must purchase (or borrow from a library) the following textbooks:

- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. Princeton: Princeton University Press.
- Li, Quan. 2018. *Using R for Data Analysis in the Social Sciences: A Research Project-Oriented Approach*. Oxford: Oxford University Press.

Students should already have the following textbooks from last semester's course:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press.
- Kelstedt, Paul, and Guy Whitten. 2018. *The Fundamentals of Political Science Research*. Third Edition. Cambridge: Cambridge University Press.
- King, Gary, Robert Keohane and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press.
- Llaudet, Elena, and Kosuke Imai. 2022 (forthcoming). *Data Analysis for Social Science: A Friendly Introduction*. Princeton, NJ: Princeton University Press.

The following textbooks are freely available:

- Huntington-Klein, Nick. 2021. *The Effect: An Introduction to Research Design and Causality* Boca Raton, Florida: CRC Press. Accessible via: https://theeffectbook.net/
- James, Gareth, Daniela Witten, Trevor Hastie, and Robert Tibshirani. 2021. *An Introduction to Statistical Learning: With Applications in R* Second Edition. New York: Springer. Accesible via: https://hastie.su.domains/ISLR2/ISLRv2_website.pdf
- Wickham, Hadley and Grolemund, Garrett. 2017. *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data*. Sebastol, California: O'Reilly Media. Accessible via: https://r4ds.had.co.nz

For some weeks, I supplement the textbook readings with other required and optional readings. When these articles can be easily found on the UT Austin Library webpage, I will ask students to download the article(s) themselves—to ensure students know how to use the library website; otherwise, I will post the article(s) on the class website, Canvas. For more information on the specific reading assignments for each week, refer to the Class Schedule (below). Optional readings are not required for each class period, and reading them will not enable students to receive extra credit. However, I may use these readings to supplement the textbook in case it is necessary to facilitate comprehension of important topics.

2.4. Attendance, Quizzes, and Participation

All students must come to class prepared, having completed the readings before class. At the beginning of each class, I will give everyone a five-question, multiple-choice quiz.

The quiz serves three purposes. First, the quiz will help keep track of attendance and serve as a commitment device for students to attend class and on-time. Even if students miss questions on the quiz but are present for class, they will receive full credit toward attendance for the respective class. Overall, attendance will account for 5% of students' final grades.

Second, since the quiz will only cover the most basic ideas from the required reading, the quiz will serve as a reward: you should receive 100% every time if you read. To give students some cushion for bad days or extenuating circumstances, I will drop your lowest 2 scores. I will make no other accommodations should students miss class for any reason or

arrive late and miss the quiz. In total, students' average quiz score will comprise 10% of your final grade.

Third, the quiz will help ensure that students are ready to participate in class discussion and do not rely entirely on my lecture to learn the materials. The material is challenging, and passive learning will generally not suffice for students to perform well in the course. On that score, participation will comprise 5% of each students' final grade in the course. As stipulated in the Policies section of this syllabus, I will make every possible effort to ensure that students feel comfortable participating. To ensure that you receive a good grade for participation, please try to make at least one meaningful contribution to discussion each class.

2.5. IPD Internship

Each week, the Task Team Leader from the respective Innovations for Peace and Development (IPD) teams will send students/team members assignments. On average, these assignments will take students around 3-5 hours to complete. By Monday at 11:30am each week, students will update a time-tracking Google Sheet where they will keep track of their hours and the tasks that they complete for their IPD internship. The Task Team Leaders from the respective research team will sign-off on each student's hours. Based on these Google Sheets and feedback from the respective Task Team Leaders, students will receive a grade for their IPD internship participation. That grade will comprise 15% of students' final grade for the course.

2.6. Office Hours and Meetings with the Instructor

Students must meet with me at least two times by April 10. During the first meeting, we will discuss necessary steps to make your Research Proposal from the first semester into a full-fledged Research Paper by the end of this second semester of the course. The second meeting will entail discussion of students' progress on their Research Papers. In case students have a work or class commitment, I will be happy to meet with them outside my designated office hours. To obviate having to wait in long lines, students may book an office hours slot here. Students who do not meet with me at least twice before April 10 will lose one point toward their final grade. This requirement is in place because last-minute efforts will generally not suffice to do well in the course.

2.7. Homework Policies

Homework assignments will comprise 10% of students' final grades. For each written assignment that students complete using LaTeX, they will receive two extra credit points for the particular assignment.

Students may consult with other members of the class and/or work in groups for the `Stata`/`R` assignments but not other homework assignments. Regardless of whether students choose to work in groups on the `Stata`/`R` assignments, students must submit their own copies of their work—i.e., no group submissions. Students are also not allowed to post

their homework questions on the Stack Exchange, R help forums, and Stata help forums. Additionally, students may not seek help from people outside the class, such as from a friend, professor, PhD student, etc. Students who received any sort of prohibited outside help will receive a zero for that particular assignment. These policies are in place because the only way to become proficient in these programs is to actually use them and make mistakes until you get it right.

If you need help with a particular question, feel free to book an office hours slot. Provided that you attended the class where I covered the material at hand or missed class due to an excused absence (see above), I am very happy to help! I will not provide additional make-up training during office hours if you missed class for a non-excused absence.

2.8. Research Week Presentations

All students must participate in UT Research Week (April 5, 2023). Participation entails making poster presentations for: (1) the UT Government Department poster session; and (2) the whole university poster session. To qualify for research week, you will need to submit an abstract to the university by DATE TBA. If the poster sessions will be in-person, you will need to submit them your poster to the Undergraduate Research Office by March 27, 2023. You may obtain more information on the whole process on the UT Research Week website. Because the university will not accept late submissions, the course late submission policy will apply; all students who do not fulfill these requirements will receive zero for the respective assignments.

2.9. Research Paper, Sub-Assignments, Referee Reports, and Presentation (and Extra Credit)

Having students write a first-rate Research Paper is a primary goal for the course. In the past, students have produced research papers relating to foreign aid, governance, political economy, political violence, peace processes, international development, and many other topics. In the past (and currently), many students have been accepted (and funded) to present their research at the Midwest Political Science Association meeting in Chicago, IL, and several students have even published their papers in academic journals.

During the first semester, students produced a Research Design with the following elements:

1. An introduction to a puzzle in an academic literature of the student's choosing
2. A clear description of the dependent variable
3. A clear critique of an existing literature related to the student's topic, covering how different independent variables have explained their dependent variable
4. A theory/argument that explains the puzzle and mechanistically traces why it causes the dependent variable
5. A research design, articulating how the student plans to test the theory/argument

During this second semester of the course, students will make the appropriate updates to their Research Designs from the first semester. After some hard work, students should be able to convert their Research Designs into a complete Research Paper by the end of this second semester of the course. To ensure students are on track to complete their Research Papers by the end of the semester and receive adequate feedback along the way, the course will contain the following sub-assignments:

1. Revise & Resubmit Assignment [due February 3]
2. Clean dataset [due February 24]
3. Research Week poster material submission [due TBA]
4. A draft paper with all sections, including an analysis section with estimated regression results, but excluding the conclusion [due April 7]
5. A Referee Report of another student's progress on his/her paper to date [due April 21]
6. A Presentation of students' final Research Papers [April 24]

For each of these sub-assignments (except the Poster and Presentation), students will receive an extra two points if they submit their assignments using LaTeX. All of these sub-assignments must include a bibliography—generated automatically using `Mendeley` or another program such as `Zotero` or `EndNote`—as learned during the first semester of the course. Students should not be wasting time by manually generating a bibliography. Because it is abundantly clear to the instructor when students do not generate their bibliographies with one of these programs, students can expect to lose points when they generate their bibliographies manually.

I will provide feedback on relevant sub-assignments within one week of submission or earlier. The Referee Report will also provide useful feedback for students. Additionally, the Referee Reports serve as a medium for students to learn how to critique others' quantitative studies in a respectful way, thereby enabling the students to become better scholars. The Referee Report will account for 5% of students' overall grades.

After completing all of the sub-assignments and the Referee Reports, students will submit a final Research Paper. The final Research Paper should incorporate feedback from all the previous assignments and the student Referee Reports as well as include a bibliography made with `Mendeley` or another program. The final Research Paper will comprise 15% of students' final grades and will be due on May 1 at 11:30am.

As with the sub-assignments, the Research Paper also presents an opportunity for extra credit: students who write their Research Paper in LaTeX will receive an two extra points toward their final grade on the Research Paper. During office hours, I would be more than happy to help students who are having issues with formatting anything in LaTeX. I cannot provide the same support for anything written in Microsoft Word, Libre Office, Google Docs, etc.

On the final day of class, students will give 5-10 minute presentations of their work. The presentation will comprise 5% of students' grades. Since we will not have time to cover

LaTeX `Beamer` during class, students will not be able to receive extra credit for submitting their presentations in LaTeX `Beamer`.

3. Policies

3.1. Grading Rubric

- Attendance: 5%
- Class Participation: 5%
- Quizzes: 10%
- Homework: 10%
- Revise & Resubmit Assignment: 10%
- Clean Dataset: 5%
- Research Week Poster: 5%
- Empirical Section/Results Sub-Assignment: 10%
- Referee Report: 5%
- Research Paper: 15%
- Final Presentation: 5%
- IPD Internship Evaluation: 15%

- Potential Penalty: Instructor Meetings: 1 potential point for not meeting with the instructor twice before April 10.

3.2. Grading Scale

- 92.50-100 (A)
- 92.49-89.50 (A-)
- 86.50-89.49 (B+)
- 82.50-86.49 (B)
- 79.50-82.49 (B-)
- 76.50-79.49 (C+)
- 72.50-76.49 (C)
- 69.50-72.49 (C-)
- 66.50-69.49 (D+)
- 62.50-66.49 (D)
- 59.50-62.49 (D-)
- 59.49 or below (F)

3.3. Grade Rounding

The above grading scale already incorporates very generous grade rounding, not to mention the multitude of extra credit opportunities. Accordingly, there will be no additional rounding of grades under any circumstance.

3.4. Grade Posting on Canvas

I will post all grades to the class website, Canvas. I will also use the option where students may discern the average score of the class. This way, students will know where they stand by the end of the semester.

3.5. Grade Appeals

If you would like to appeal your grade on any assignment, you must make the request to me in writing, over email, within 5 days of receiving your grade. In your grade appeal, you must specify the reason(s) why you think I misgraded the paper. Acceptable reasons include those pertaining to the concepts and material covered during the course. I will not consider requests for grade changes that are not germane to the course.

3.6. COVID-19 Safety Protocols

3.6.1. Masks

University policy is to follow CDC guidance. So, until the CDC guidance suggests differently, wearing a mask is optional in this course.

3.6.2. If You Test Positive for COVID-19

Follow this guidance.

3.7. Independent Inquiry Flag

This course carries the Independent Inquiry flag. Independent Inquiry courses are designed to engage you in the process of inquiry over the course of a semester, providing you with the opportunity for independent investigation of a question, problem, or project related to your major. You should therefore expect a substantial portion of your grade to come from the independent investigation and presentation of your own work.

3.8. Quantitative Papers Only

Although this course covers some qualitative research, the focus of the course is quantitative. Accordingly, students must write a quantitatively-oriented or mixed methods paper for their Final Research Papers.

3.9. Writing Flag

This course carries the Writing Flag. Writing Flag courses are designed to give students experience with writing in an academic discipline. In this class, you can expect to write regularly during the semester, complete substantial writing projects, and receive feedback from your instructor to help you improve your writing. You will also have the opportunity to revise one or more assignments, and you may be asked to read and discuss your peers' work.

You should therefore expect a substantial portion of your grade to come from your written work. Writing Flag classes meet the Core Communications objectives of Critical Thinking, Communication, Teamwork, and Personal Responsibility, established by the Texas Higher Education Coordinating Board.

3.10. Writing Quality of Papers and Assignments

I expect that students will submit their papers and assignments using proper grammar and writing, etc. I will alert students early in the semester if I see that they are having trouble with their writing so that they may seek help from the appropriate source. Because part of research involves being able to communicate in a clear writing style, the quality of exposition will be one element that I will consider when examining students' submissions.

3.11. Absences

As described in the Course Requirements section of the syllabus (above), it will be very difficult to perform well in the course if you do not attend regularly. The only absences that I will consider legitimate include those pertaining to religious holidays, illness, extenuating circumstances due to an emergency, and university-excused absences. For illnesses, you will need to either provide me with a doctor's note, or you will need to send me an email before class to inform me that you are sick and won't be attending. If you are sick and do not provide me with a doctor's note or email me before class, your absence will not be excused except under very extenuating circumstances.

3.12. Late Work

Unless you receive prior approval from me, I will not accept late final Research Papers or Empirical Analysis/Results sections, and I will discount all other late assignments as follows:

- 1-15 minutes: 0% (grace period for last-minute issues)
- 15 minutes-24 hours late: -10%
- 24-48 hours late: -25%
- more than 2 days late: -50%
- more than one week: -75%
- more than two weeks: no credit offered

3.13. Students Rights and Responsibilities

- You have a right to a learning environment that supports mental and physical wellness.
- You have a right to respect.
- You have a right to be assessed and graded fairly.

- You have a right to freedom of opinion and expression.
- You have a right to privacy and confidentiality.
- You have a right to meaningful and equal participation, to self-organize groups to improve your learning environment.
- You have a right to learn in an environment that is welcoming to all people. No student shall be isolated, excluded or diminished in any way.

With these rights come these responsibilities:

- You are responsible for taking care of yourself, managing your time, and communicating with the instructor if things start to feel out of control or overwhelming.
- You are responsible for acting in a way that is worthy of respect and always respectful of others.

3.14. Personal Pronoun and Name Preferences

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

3.15. Academic Integrity

Each student in the course is expected to abide by the University of Texas Honor Code: "As a student of The University of Texas at Austin, I shall abide by the core values of the University and uphold academic integrity." Plagiarism is taken very seriously at UT. Therefore, if you use words or ideas that are not your own (or that you have used in previous class), you must cite your sources. Otherwise you will be guilty of plagiarism and subject to academic disciplinary action, including failure of the course. You are responsible for understanding UT's Academic Honesty and the University Honor Code, which can be found at the following web address: http://deanofstudents.utexas.edu/sjs/acint_student.php

3.16. Sharing of Course Materials is Prohibited

No materials used in this class, including, but not limited to, lecture hand-outs, videos, assessments (quizzes, exams, papers, projects, homework assignments), in-class materials, review sheets, and additional problem sets, may be shared online or with anyone outside of the class unless you have my explicit, written permission. Unauthorized sharing of materials promotes cheating. It is a violation of the University's Student Honor Code and an act of academic dishonesty. I am well aware of the sites used for sharing materials, and any materials found online that are associated with you, or any suspected unauthorized sharing

of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure in the course.

3.17. FERPA and Class Recordings

Class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings. Guidance on public access to class recordings can be found here.

3.18. Drop Policy

If you want to drop a class after the 12th class day, you'll need to execute a Q drop before the Q-drop deadline, which typically occurs near the middle of the semester. Under Texas law, you are only allowed six Q drops while you are in college at any public Texas institution. For more information, see: http://www.utexas.edu/ugs/csacc/academic/adddrop/qdrop

3.19. University Resources for Students

Your success in this class is important to me. We will all need accommodations because we all learn differently. If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we'll develop strategies to meet both your needs and the requirements of the course. There are also a range of resources on campus:

3.19.1. Services for Students with Disabilities

This class respects and welcomes students of all backgrounds, identities, and abilities. If there are circumstances that make our learning environment and activities difficult, if you have medical information that you need to share with me, or if you need specific arrangements in case the building needs to be evacuated, please let me know. I am committed to creating an effective learning environment for all students, but I can only do so if you discuss your needs with me as early as possible. I promise to maintain the confidentiality of these discussions. If appropriate, also contact Services for Students with Disabilities, 512-471-6259 (voice) or 1-866-329- 3986 (video phone). http://ddce.utexas.edu/disability/about/

3.19.2. Counseling and Mental Health Center

Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support: http://www.cmhc.utexas.edu/individualcounseling.html

3.19.3. The Sanger Learning Center

The Sanger Learning Center provides classes and workshops, private learning specialist appointments, peer academic coaching, and tutoring for more than 70 courses in 15 different subject areas. For more information, please visit http://www.utexas.edu/ugs/slc or call 512-471-3614 (JES A332).

3.19.4. Undergraduate Writing Center & Other Resources

Writing Center: http://uwc.utexas.edu/
Libraries: http://www.lib.utexas.edu/
ITS: http://www.utexas.edu/its/
Student Emergency Services: http://deanofstudents.utexas.edu/emergency/

3.19.5. Important Safety Information

If you have concerns about the safety or behavior of fellow students, TAs or Professors, call BCAL (the Behavior Concerns Advice Line): 512-232-5050. Your call can be anonymous. If something doesn't feel right, it probably isn't. Trust your instincts and share your concerns.

The following recommendations regarding emergency evacuation from the Office of Campus Safety and Security (512-471-5767, http://www.utexas.edu/safety/):

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Link to information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency

4. Class Schedule, Readings, and Homework

Week 1: Review from Last Semester (January 9)

Class:

- Discussion of Syllabus
- Review of Final Issues List/issues in papers (all sections)

Required Reading:

- Li, Quan. 2018. *Using R for Data Analysis in the Social Sciences: A Research Project-Oriented Approach*. Oxford: Oxford University Press. Chapter 1.
  - Read: pages 1-23, 32-42
  - Optional: pages 23-32

Required Assignments:

- Carefully read the new course syllabus for this semester
- Complete all chapters from Data Camp's Free Introduction to R course and upload your personalized certificate of completion to Canvas by Friday, January 20 at 11:30am. You may, however, skip the chapter on Matrices. If you do, please upload a screen shot for each of the other chapters that you completed by the same deadline.
  - Note: All students previously received an email to their utexas email accounts with free access to Data Camp for 6 months. To receive this free access, it is imperative to register with your utexas email account; otherwise, it will be necessary to pay.

Optional Refresher Reading:

- Llaudet, Elena, and Kosuke Imai. 2022 (forthcoming). *Data Analysis for Social Science: A Friendly Introduction*. Princeton, NJ: Princeton University Press.
  - Read/Review from Last Semester: Chapter 1.

Optional Refresher Videos:

- Watch this Getting Started with R and `R Studio` video (from last semester)
- Watch this Introduction to R video.
- Watch the videos on UT-Austin's Lynda Portal

Week 2: Papers!!! But No Class due to MLK Day (January 16)

Required Assignments:

- Despite there being no class this week, please schedule a meeting with me this week (from Tuesday, January 17 to Friday, January 20) to debrief and plan your paper.

  - As a reminder, students must meet with me at least two times by April 10. During the first meeting, we will discuss necessary steps to make your Research Proposal from the first semester into a full-fledged Research Paper by the end of this second semester of the course. The second meeting will entail discussion of students' progress on their Research Papers. In case students have a work or class commitment, I will be happy to meet with them outside my designated office hours. To obviate having to wait in long lines, students may book an office hours slot here. Students who do not meet with me at least twice before April 10 will lose one point toward their final grade. This requirement is in place because last-minute efforts will generally not suffice to do well in the course.

Extra Credit Assignment:

- UT Undergraduate Research Fellowship application: due to the instructor over email, not Canvas, by Friday, January 20 at 11:30am. Please contact me well before the deadline if you are planning on applying. I will provide feedback on any applications right away so that students can meet the university application deadline of Monday, January 23. A complete application entails a 4-page proposal with budget and recommendation letter (see above link). There are quite a few awards: last year, circa 50% of applicants received an award. These awards can be up to $1,000. All four students who applied from this course in the past have received their full requested allocation.

Week 3: Data Cleaning in R (January 23)

Class:

- R Training
  - Importing Data (`.csv`, `.xls`, `.xlsx`, `.dta`)
  - Subsetting (i.e., creating new data frames)
  - Inspecting the data (`head`, `View`, `dim`, `summary`)
  - Creating new variables and indexing
  - Conditional statements (`ifelse`)
  - Importing World Bank World Development Indicators data directly from R
  - Merging data
  - Appending data
  - Reshaping data
  - Finding and removing duplicates
  - Converting characters/string variables to numeric variables
  - Recoding data
  - Sorting data

  - Creating lag and lead variables
  - Taking logs
  - Labeling variables

Required Reading:

- Li, Quan. 2018. *Using R for Data Analysis in the Social Sciences: A Research Project-Oriented Approach*. Oxford: Oxford University Press. Chapter 2.
  - Read: pages 43-78, 91
  - Optional: pages 78-85
  - Skip: pages 86-90, 92-93

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Monday, January 23 at 11:30am
- From Data Camp's Intermediate R Course, complete only the freely-available Chapter 1, Conditionals and Control Flow. Once you are done, take a screenshot to prove that you have completed this chapter 1, and upload your screenshot to Canvas by Monday, January 23 at 11:30am
- From Data Camp's Introduction to the Tidyverse course, complete the first three chapters: "Data Wrangling" and "Grouping and Summarizing". Once you are done, take a screenshot to prove that you have completed these chapters, and upload your screenshot to Canvas by Monday, January 23 at 11:30am.

Optional Reading:

- Imai, Kosuke. 2017. *Quantitative Social Science: An Introduction*. Princeton, NJ: Princeton University Press. Chapter 2.
  - Read: Sections 2.1-2.4

Week 4: Correlation, Causation, and Data Visualization in R (January 30)

Class:

- Substantive topics:
  - Basic descriptive statistics:
    - Mean, median, variance, and standard deviation
  - More advanced descriptive statistics:
    - Covariance and correlation
  - The basics of causation

        - The potential outcomes framework
    - Heterogenous treatment effects
- Data Visualization in R coding in `ggplot2`:
    - Line graphs
    - Bar graphs
    - Scatter plots
- Other review material

Required Reading:

- Dreher, Axel, Jan-Egbert Sturm, and James Raymond Vreeland. 2009. "Development Aid and International Politics: Does Membership on the UN Security Council Influence World Bank decisions?" *Journal of Development Economics* 1:1-18.
    - Skim: The Appendix at the end of the article, devoting 3 minutes to your skim.
- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. Princeton: Princeton University Press.
    - Read: Chapters 2 and 3.

Required Assignment:

- Please update your IPD time-tracking Google Sheet by Monday, January 30 at 11:30am
- Revise and Resubmit (R&R) Assignment: due Friday, February 3 at 11:30am
    - Congratulations! The editor at a prestigious journal is impressed by the paper you submitted for publication last semester, and so is the anonymous referee who read your paper at the editor's request. Consequently, the editor has offered you a chance to revise and resubmit (R&R) your paper for further review. Because R&R opportunities at prestigious journals are exceptionally difficult to obtain, you definitely want to take advantage of the opportunity and submit your best possible work. In doing so, please revise your paper based on the latest round of comments you received last semester from the instructor (i.e., the editor) and the referee report you received from your classmate (i.e., anonymous reviewer). In addition to addressing the feedback you received, please write a letter to the journal editor that explains exactly how you addressed his feedback as well as that of your anonymous reviewer. You can find example letters to the editor and response memos under "Files, Referee Reports and R&R Assignments" on Canvas. When submitting your R&R assignment on Canvas by Friday, February 3 at 11:30am, please include the following as attachments on Canvas:
        1. A revised version of your paper that:
            (a) addresses the feedback received from the editor
            (b) addresses the feedback received from the anonymous reviewer

(c) demonstrates that you have included all requested elements from the Introduction, Dependent Variable Section, Literature Critique, and Research Design sections described on last semester's syllabus.

(d) begins with a 125-200 word abstract, including the following elements:

i. 1-2 sentence(s) on why your topic is important, ensuring that you show without "telling" the reader, and definitely do not use the word "important"

ii. 1-2 sentence(s) on your argument/theory

iii. 1-2 sentence(s) on how you test your argument/theory, including justification of your case/data, if necessary

iv. 1 sentence stating the expected policy or theoretical contribution of your paper.

(e) has an Appendix Table mimicking Table B in Dreher, Sturm, and Vreeland (2009), including the name of each variable, complete description of the variable, and the source of the data.

* Here's some LaTeX code if you need help making a table

2. A letter to the editor explains how you addressed the specific points of feedback that you received from the editor and reviewer

3. The anonymous review (referee report) that you received last semester.

Further Reading/Review from Last Semester (Not Required):

- Denly, Michael, Michael Findley, Joelean Hall, Andrew Stravers, and James Igoe Walsh. 2022 (Forthcoming). "Do Natural Resources Really Cause Civil Conflict? Evidence from a New, Georeferenced Dataset." *Journal of Conflict Resolution.*
  - Skim: The Codebook for The Global Resources Dataset, devoting 5-10 minutes to your skim.
  - Optional: The paper.
- Llaudet, Elena, and Kosuke Imai. 2022 (forthcoming). *Data Analysis for Social Science: A Friendly Introduction.* Princeton, NJ: Princeton University Press.
  - Read/Review from Last Semester: Chapter 1.
- Li, Quan. 2018. *Using R for Data Analysis in the Social Sciences: A Research Project-Oriented Approach.* Oxford: Oxford University Press.
  - Chapter 4
    * Read: 143-159
    * Optional: pages 160-168

Week 5: Measurement, External Validity, and Transparency (February 6)

Class:

- Measurement
- External validity
- Transparency
  - p-hacking and false positives
  - The replication crisis
  - Pre-analysis plans/pre-registration

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press.
  - Read: pages 53-54 (Internal and External Validity).
- King, Gary, Robert Keohane and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton University Press.
  - Section 4.1., Indeterminate Research Designs
    - Read only pages 118-119.
  - Section 4.2., Limits of Random Selection
    - Read only the bottom of page 124.
  - Section 4.3., Selection Bias and Selecting on the Dependent Variable
    - Read only page 128 until "avoid them!" on page 130.
  - Section 4.3.1., Selecting on an Explanatory Variable
    - Read only the first paragraph of page 137.
  - Section 5.1.1., Systematic Measurement Error
    - Read only page 156.
  - Section 5.1.2.1., Nonsystematic Measurement Error in the Dependent Variable
    - Read only the first paragraph of pages 158-159.
  - Section 5.2., Excluding Relevant Variables: Bias
    - Read only pages 168-169.
  - Section 5.3., Including Irrelevant Variables: Inefficiency
    - Read only the middle of page 182-183.

  - Section 5.4., Endogeneity
    * Read only the bottom page of 185-186.

Required Assignment:

- Please update your IPD time-tracking Google Sheet by Monday, February 6 at 11:30am
- From Data Camp's Joining Data with `dplyr`, complete the first three chapters: "Joining Tables", "Left and Right Joins", and "Full, Semi, and Anti Joins". Once you are done, take screenshots to prove that you completed the work, and upload those screenshots to Canvas by Monday, February 6 at 11:30am

Further Reading (Not Required):

- Findley, Michael, Koysuke Kikuta, and Michael Denly. 2021. "External Validity." *Annual Review of Political Science* 24:365–393.
- Geddes, Barbara. 2003. *Paradigms and Sand Castles: Theory Building and Research Design in Comparative Politics*. Ann Arbor, MI: University of Michigan Press.
  - Read: Chapter 3, pages 89-129.
- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. Princeton: Princeton University Press.
  - Read: Chapters 4, 9, 10, and 11.
- Collier, David, and James Mahoney. 1996 "Insights and Pitfalls: Selection Bias in Qualitative Research." *World Politics* 49(1): 56-91.
- Gerring, John. 2017. "Qualitative Methods." *Annual Review of Political Science* 20(1): 15-36.
- Mahoney, James. 2010. "After KKV: The New Methodology of Qualitative Research." *World Politics* 62(1): 120-147.
- Nosek, Brian *et al.* 2014. "Estimating the Reproducibility of Psychological Science." *Science* 349(6251): aac4716-1 - aac4716-8.
- Ioannidis, John. 2005. "Why Most Published Findings Are False." *PLoS Medicine* 2(8): 0696-0701.
- Gerber, Alan, and Neil Malhotra. 2008. "Do Statistical Reporting Standards Affect What Is Published? Publication Bias in Two Leading Social Science Journals." *Quarterly Journal of Political Science* 3(3): 313-326.
- Gerber, Alan, and Neil Malhotra. 2008. "Publication Bias in Empirical Sociological Research." *Sociological Methods and Research* 37(1): 3-30.

Week 6: Hypothesis Testing (February 13)

Class:

- Null hypothesis significance testing
  - t-test
  - Z-score
  - Confidence intervals
  - Type I error
  - Type II error
  - p-values
- Introduction to Bayesian statistics and hypothesis testing (if time allows)

Required Reading:

- Denly, Michael. 2021. "Making Merges Go Through Using `tidylog` and `anti_join`." Blog Post.
  - I will be expecting to see you use these techniques when you submit your R script for the clean dataset assignment, which is due next week.
- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. Princeton: Princeton University Press.
  - Read: Chapter 6, pages 102-110.
- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press.
  - Read: Chapters 19 and 20.
- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamental of Political Science Research*. Third Edition. Cambridge: Cambridge University Press.
  - Read: Chapter 8.3: The Logic of p-values (pages 163-166).
    - Note: If you are using the 2013 edition, it's Chapter 7.3 (pages 147-150).

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Monday, February 13 at 11:30am.
- Please start working on cleaning the data for your paper. The clean data assignment is due next week.

Further Reading (Not Required):

- Altman, Sara, Bill Behrman, and Hadley Wickham. 2021. "Data Wrangling." Stanford Data Challenge Lab.
  - Read: Chapters 5 and 6 for help with pivoting/reshaping data
- Imai, Kosuke. 2017. *Quantitative Social Science: An Introduction*. Princeton, NJ: Princeton University Press. Chapter 3.

- Li, Quan. 2018. *Using R for Data Analysis in the Social Sciences: A Research Project-Oriented Approach*. Oxford: Oxford University Press. Chapter 3.

Week 7: Linear Regression I: The Basics (February 20)

Class:

- The logic of regression:
  - Regression equation
  - Intercept
  - Coefficient/parameter
  - Errors/residuals
  - Ordinary Least Squares (OLS)
  - Regression line
  - Multiple regression
  - R^2 and the F-test
  - Omitted variable bias
  - Substantive vs statistical significance

Required Reading:

- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. Princeton: Princeton University Press.
  - Read: Chapter 5, only pages 74-79
- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamental of Political Science Research*. Third Edition. Cambridge: Cambridge University Press.
  - Read: pages 221-225 (Section 10.4), 227 (Section 10.6)
    - Note: If you are using the 2013 edition, it's pages 202-206 (Section 9.4), 207-209 (Section 9.6)
- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press.
  - Read: Chapter 22, only pages 343 (Multiple Regression)-352

Required Assignment:

- Please update your IPD time-tracking Google Sheet by Monday, February 20 at 11:30am
- Submit your clean dataset for your paper by Friday, February 24 at 11:30am. Your submission should include two attachments:

1. Your clean dataset (in one file) with labeled variables (exported as a Stata `.dta` file)
2. An accompanying R script or `Stata .do` file to show your work and how you labeled your variables, etc.

Further Reading (Not Required):

- James, Gareth, Daniela Witten, Trevor Hastie, and Robert Tibshirani. 2021. *An Introduction to Statistical Learning: With Applications in R*. Second Edition. New York: Springer. Chapter 3.
- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press. Chapter 22.
- Imai, Kosuke. 2017. *Quantitative Social Science: An Introduction*. Princeton, NJ: Princeton University Press. Chapter 4.2-4.3.
- King, Gary. 1986. "How to Not Lie with Statistics: Avoiding Common Mistakes in Quantitative Political Science." *American Journal of Political Science* 30(3): 666-687
- Luskin, Robert. 1991. "Abusus Non Tollit Usum: Standardized Coefficients, Correlations, and R^2s." *American Journal of Political Science* 35(4): 1032-1046.

Week 8: Linear Regression II: Implementation in R & Diagnostics (February 27)

Class:

- R Training
  - Bivariate linear regression with continuous variable
  - Bivariate linear regression with a dummy variable
  - Multivariate linear regression
  - Producing beautiful regression tables with `stargazer`
  - Producing beautiful coefficient plots with `ggcoef`
  - Generating and plotting the residuals and fitted values
  - Testing for collinearity (VIF)
  - Testing for heteroskedasticity
  - Robust standard errors
  - Clustering standard errors
  - Testing for outliers and removing them

Required Reading:

- Long, Abby. 2016. "10 Things to Know About Reading a Regression Table." Evidence in Governance and Politics (EGAP). https://egap.org/resource/10-things-to-know-about-reading-a-regression-table/
- Blattman, Chris. 2015. "Clusterjerk." Blog Post.
- About Robust and Clustered Standard Errors Blog post.

Required Assignment:

- Please update your IPD time-tracking Google Sheet by Monday, February 27 at 11:30am.
- From Data Camp's Correlation and Regression Course, complete only the chapters on Simple Linear Regression, Interpreting Regression Models, and Model Fit. Once you are done, please upload screen shots to Canvas to prove that you completed these chapters by Monday, February 27 at 11:30am.

Optional Reading:

- James, Gareth, Daniela Witten, Trevor Hastie, and Robert Tibshirani. 2021. *An Introduction to Statistical Learning: With Applications in R* New York: Springer.
  - Read: Chapter 3.
- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamental of Political Science Research*. Third Edition. Cambridge: Cambridge University Press. Chapter 10
  - Note: if you are using the 2013 edition, it's Chapter 9
- Hainmueller, Jens, Jonathan Mummolo, and Yiqing Xu. 2019. "How Much Should We Trust Estimates from Multiplicative Interaction Models? Simple Tools to Improve Empirical Practice." *Political Analysis* 27: 163-192.

Week 9: Panel Data Linear Regression (March 6)

Class:

- Applications in R
  - Least-Square Dummy Variable (LSDV) Model
  - Fixed effects (demeaning method)
  - Testing for serial correlation
  - Testing for unit roots/stationarity
  - Testing for heteroskedasticity

Required Reading:

- Torres-Reyna, Oscar. 2010. "Getting Started in Fixed/Random Effects Models Using R." Manuscript. Princeton University.
  - Read: Slides 2, 8, 9, 11, 12, 14, 18, 22, 23

Required Assignment:

- Please update your IPD time-tracking Google Sheet by Monday, March 6 at 11:30am.
- If you have not already, start estimating your models and writing the empirical section of your paper. You will need at least some preliminary results for your poster sessions.

Reminder:

- If you have not already met with me twice, it would be advisable to book another 15-minute office hours slot before April 10. You do not want to lose 1 point toward your final grade for failing to fulfill this requirement.

Further Reading (Not Required)

- Torres-Reyna, Oscar. 2007. "Panel Data Analysis: Fixed and Random Effects Using Stata." Manuscript. Princeton University.
  - Read: Slides 2-3, 5, 9-12, 15-19, 23, 25-27, 29
  - For those doing a panel data model in their papers: 30-39

Week 10: No Class due to Spring Break (March 13)

Week 11: Logistic Regression (March 20)

Class:

- The basics of logistic regression
- Panel logistic regression with fixed effects
- Applications in `R` and `Stata`

Required Reading:

- Kellstedt, Paul, and Guy Whitten. 2018. *The Fundamental of Political Science Research*. Third Edition. Cambridge: Cambridge University Press.
  - Read: pages 273-281 (Section 12.1-12.2)
    - Note: If you are using the 2013 edition, it's pages 247-256 (Section 11.1-11.2)
- Li, Quan. 2018. *Using R for Data Analysis in the Social Sciences: A Research Project-Oriented Approach*. Oxford: Oxford University Press. Appendix.
  - Read: pages 313-322
- Rodriguez, German. 2019. "Longitudinal Logits."
  - Take a brief look, and keep this in mind for later if you are using logistic regression for your project.

Required Assignment:

- From Data Camp's course on Multiple and Logistic Regression, complete the "Logistic Regression" chapter, and upload a screenshot that proves you completed the chapter by Monday, March 20 at 11:30am.
- Please ensure that you submit your completed poster on Canvas to me on Canvas by TBD. Because you will need to submit the poster to the University printing shop by TBD, I will provide feedback right away. More details here. You will need this poster for the Government Department Poster Session (Week of TBA) and the UT Research Week Poster Session (Week of TBA).

Optional Reading

- Karaca-Mindic, Pinar, Edward C. Norton, and Bryan Dowd. 2012. "Interaction Terms in Nonlinear Models." *Health Services Research* 47(1): 255-274.

Week 12: Difference-in-Differences & Synthetic Control (March 27)

Class

- The logic of diff-in-diff
- Card and Krueger (1994)
- Abadie, Diamond, and Hainmueller (2010)
- How to estimate dif-in-dif and synthetic control in R and `Stata`

Required Reading and Video:

- Imai, Kosuke. 2017. *Quantitative Social Science: An Introduction*. Princeton, NJ: Princeton University Press.
  - Read: Section 2.5 (pages 54-63)
- Abadie, Alberto, Alexis Diamond, and Jens Hainmueller. 2010. "Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program." *Journal of the American Statistical Association* 105(490): 493-505.
  - Watch: Video that shows you how to estimate the results from the article in Stata. The video also helps with the understanding of the concept of the synthetic control.
- Xu, Yiqing. 2017. "Generalized Synthetic Control Method: Causal Inference with Interactive Fixed Effects Models." *Political Analysis* 25: 57-76
  - Read: pages 68 (starting at Empirical Example)-69 (first two lines) [yes, one paragraph only]
  - Optional: How to run `gsynth` in R

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Monday, March 27 at 11:30am.

- Please continue working on your Empirical Analysis section, which is due next week. Given that two poster sessions will take place the following week, you really do not want to leave everything till the last minute.

Further Reading (Not Required)

- Card, David, and Alan Kruger. 1994. "Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania." *American Economic Review* 90(5): 1397-1420.
- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. Princeton: Princeton University Press.
  - Read: Chapter 13.
- Abadie, Alberto, Alexis Diamond, and Jens Hainmueller. 2015. "Comparative Politics and the Synthetic Control Method." *American Journal of Political Science* 59(2): 495-510.

Week 13: Regression Discontinuity Designs (RD/RDD) (April 3)

Class:

- Discussion
  - The logic of the sharp RD
  - How to estimate RD models in R with `rdrobust`

Required Reading:

- Gerring, John, and Dino Christenson. 2017. *Applied Social Science Methodology: An Introductory Guide*. Cambridge: Cambridge University Press. Chapter 8.
  - Review (from last semester): Regression Discontinuity (RD) Designs (pages 132-134)
- Carrell, Scott, Mark Hoekstra, and James West. 2009. "Does Drinking Impair Performance? Evidence from a Regression Discontinuity Approach." *Journal of Public Economics* 95: 54-62.
  - Read the whole article.

Required Assignment:

- Please update your IPD time-tracking Google Sheet by Monday, April 3 at 11:30am.
- By Friday, April 7 at 11:30am, please submit the latest version of your entire paper, which will now include an Empirical Analysis/Results section as well as a discussion of those results. I will be looking for the following elements:
  - The codebook that you wrote for the respective earlier assignment, included in an Appendix table

  - Your R script or `Stata .do` file as well your labeled data attached as separate items
  - A justification of why the data you picked help you answer your research question
  - A description of the data and how it was measured
  - Some summary/descriptive statistics (see the R and `Stata` trainings and the Quan Li book for how to make summary stats and put them in LaTeX)
  - Some description of the method you are using as well as why it is appropriate for your problem
  - Some tables and, preferably, some coefficient plots
  - An interpretation (in words) of your results. Are the results statistically significant in the direction you argument suggest? Are your results substantively signficant?
  - How certain are you about your findings? Recall how this was one of the major things Gerring and Christenson (2017, Chapter 1) and King, Koehane, and Verba (1994, Chapter 1) discussed. Hint: look at things such as standard errors, confidence intervals, p-values, R squared, whether your sample is representative of some broader population, etc.
  - Can your findings be interpreted causally (internal validity)? (Hint: it has to do with the method that you use.)
  - What is the external validity of your study? In other words, how well do your results generalize to other places/contexts, people, time periods? If you think the results generalize, say where/when and why. If the results do not generalize, why not?
  - Consult Appendix A of this syllabus as well as the Greene guide, Gerring and Christenson (2017, Chapter 14), and the other guides on Canvas for further ideas.

Further Reading (Not Required):

- Cattaneo, MatÃas, NicolÃ¡s Idrobo, and RocÃo Titiunik. 2019. A Practical Introduction to Regression Discontinuity Designs (Elements in Quantitative and Computational Methods for the Social Sciences). Volume I. Cambridge: Cambridge University Press.
- Bueno de Mesquita, Ethan, and Anthony Fowler. 2021. *Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis*. Princeton: Princeton University Press.
  - Read: Chapter 12.
- Eggers, Andrew, and Jens Hainmueller. 2009. "MPs for Sale? Returns to Office in Postwar British Politics." *American Political Science Review* 103(4): 513-533.
  - Read: Introduction (pages 513-514)
  - Optional: Rest of the article.

- QuerubÃn, Pablo, and James Snyder. 2013. "The Control of Politicians in Normal Times and Times of Crisis: Wealth Accumulation by U.S. Congressman, 1850-1880." *Quarterly Journal of Political Science* 8(4): 409-450.

Week 14: Network Analysis and Test/Review (April 10)

Class:

- The basics of network analysis
- Some applications of network analysis in R
- A review of what we covered this semester

Required Reading:

- Imai, Kosuke. 2017. *Quantitative Social Science: An Introduction*. Princeton, NJ: Princeton University Press. Chapter 5
  - Read: Section 5.2 (pages 205-220)

Required Assignments:

- Please update your IPD time-tracking Google Sheet by Monday, April 10 at 11:30am.
- From Data Camp's Network Analysis in R course, complete the "Introduction to Networks" chapter, take a screenshot to prove that you completed it, and load that screenshot on Canvas by Monday, April 10 at 11:30am.

Week 15: Geomapping in R (April 17)

Class:

- Discussion
  - Geomapping in R with the `sf` package
  - Loading shape files
  - Using `mapview` to view shape files directly from the web
  - Data structures (raster, vector)

Required Assignment:

- From Data Camp's Visualizing Geospatial Data in R course, complete the "Basic mapping with `ggplot2` and `ggmap`" and "Data import and projects" chapters, take relevant screen shots to prove you completed everything, and upload the screen shots to Canvas by Monday, April 17 at 11:30am.
- Please submit a respectful referee report of one of your colleagues' empirical papers by Friday, April 21 at 11:30am. Although I would *strongly* encourage you to look at

the example referee reports on Canvas, your referee reports should have the following elements:

- In the first paragraph, summarize the author's theory and how he/she tested his/her theory. (Referee reports *always* start with this one paragraph summary of the paper).
- Discuss whether or not you found the theory and hypothesis compelling, and explain why or why not.
- Discuss whether the research design and empirical section adequately map to the theory. In other words, talk about the operationalization. (Hint: Think about the diagram in Chapter 1 of Kellstedt and Whitten (2018) that links the theory to hypothesis.) Are the data put forth useful to test the hypothesis? Did the author choose the best possible design to test his/her hypothesis? Why or why not? If another design would have been better, explicitly say so. However, please do not just propose another design without a lot of thought. In all likelihood, the author thought carefully about the particular design that he/she chose.
- Do the statistical models appear to be estimated correctly? If the author does not use an experiment or a design that attempts to mimic an experiment, did the author include relevant covariates? If not, which covariates are missing that would impact the outcome? (Hint: Refer to the slides from Week 6 on Measurement Challenges to ensure any new covariates that you think should be added to the model would actually impact the dependent variable.)
- Would you recommend that the author perform any robustness tests? If so, which robustness tests would you suggest?
- See Appendix A of this syllabus for additional guiding questions that may be useful for assessing your colleague's study.

Week 16: Student Presentations (April 24)

Class:

- Student presentations

Required Assignment:

- Kindly submit your 10-minute (timed) presentation on Canvas by Monday, April 24 at 11:30am, and ensure it has the following elements:
  - Research question/motivation for the study
  - Contribution of your work to the literature (i.e. say something about where you study fits in)
  - Your theory, which explicitly details the causal mechanism/sub-reasons

- The empirical method you are using to test your hypothesis, and why it is appropriate
- the dependent variable,main independent variable, and control variables used – and summary statistics or maps (better–picture is worth a thousand words) of these
- Your main results in a table or coefficient plot (preferable)
- Some conclusions

Final Research Paper Due Date: May 1 at 11:30am

- Since the registrar has very tight deadlines for instructor grade submissions, I unfortunately will not be able to accept any late papers—beyond a 15-minute grace period to account for technical issues at submission, etc.

Appendix A Questions to Consider for Papers

A.1 All Studies

1. Does the study answer an important question to the world, and does the author justify its importance with a factual argument—as opposed to justifying the topic in overtly normative terms?
2. Does the study contribute to a scholarly literature, and does the author demonstrate sufficient knowledge of that literature to critique it and add to it?
3. Does the study abide by the rules of (descriptive or causal) inference—and contain public procedures, uncertainty estimates, a disinterested posture toward the truth, attention to possible error, and scope conditions?
4. Is the author clear and consistent about the type of relationships, theory, and objectives of the research?
5. Is the writing clear, does the author avoid the passive voice and colloquial language, and are there any grammar issues?

A.2 Quantitative Studies

1. Is the dependent variable in its concept form clear to the reader?
2. Is the principal independent variable in its concept form clear to the reader?
3. Are there cleanly measured, credible data available that clearly map to the dependent variable and independent variable in their concept forms?
4. Is there a falsifiable theory that is formulated at a high level of abstraction?

5. Is there a clear hypothesis that is formulated at a lower level of abstraction than the theory?
6. Does the hypothesis clearly map onto the theory?
7. Is the argument coherent and credible?
8. Are the research design and data appropriate for the research question, theory, and hypothesis?

A.3 Mixed Methods Studies with Qualitative Elements

A.4 All Mixed Method Studies

1. Does the author use integration of the quantitative and qualitative methods appropriately, and avoid triangulating methods for purposes for which they are ill-suited?

Case Studies:

1. Is/are the type(s) of case studies appropriate given the research question?
2. Does the author provide a clear and compelling justification for the selection of the case(s) being examined?
3. Is the detective work for the case study complete enough to sufficiently answer the research question?

Conceptualization Pieces:

1. Does the author have a clear grasp of the semantic field—that is, does she/he identify like terms and appropriately distinguish them from the concept of interest?
2. Is the author clear about the domain of his/her concept, and appropriately classify it as experience-near (i.e. relative to a particular area) or experience-distant (i.e. universal, positivist)?
3. Does the author choose the appropriate conceptualization strategy—that is, does she/he pay appropriate attention to the abstraction of the concept, avoid conceptual stretching, specifically state the intension and extension, and justify why couching the concept in terms of cumulation, a radial concept, re-definition or family resemblance is appropriate?

Interviews:

1. Does the author select subjects who can speak to the author's research question, and is there a clear, compelling, and ethical selection criteria for subject inclusion/exclusion?
2. Does the author seek out subjects who can provide a diverse range of perspectives on the research question at hand?
3. Does the author provide details about how he/she found the subjects, whether they received compensation, and locations/conditions of the interviews?

4. Does the author ask subjects appropriate questions that map to the research question of interest?
5. Are the answers from the subjects compelling enough to answer the research question definitively?

Focus Groups:

1. All of the above questions for interviews are relevant for focus groups as well.
2. Does the author make a concerted effort to ensure that dominant people in the room do not monopolize the discussion, and that more shy people are able to contribute to the discussion?

Ethnographies:

1. Does the author provide a compelling justification for why the ethnography she/he undertakes is relevant to the research question of interest?
2. Does the author have the training and capacity (e.g. language abilities, skills) to be able to credibly undertake the ethnography?
3. Is the author's role in the ethnography distracting to the extent that it alters the behavior of the actors under study, and does the author provide a compelling justification for why his/her role is not distracting?
4. Does the author make specific reference to the ethics of the ethnography, and are there any ethical concerns regarding the author's presence?
5. Is the author's attention to method (e.g. keeping daily field notes, minimizing distraction) apparent to the reader?