AI, Jobs, and the Economy

Research Article Workshop

Summer 2026

bgpopescu.net/teaching/research_workshop/research_ai_econ.html

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Details

Instructor: Bogdan Popescu
Program Duration: 15 Weeks (9 mentor meetings)
Structure: Nine one-on-one, remote weekly sessions for 1 hour

Course Description

This course is an intensive, hands-on introduction to writing a research article in the social sciences, with a focus on political science, sociology, or economics. By the end of the course, students will have developed and refined a complete research paper through a series of iterative assignments and structured feedback. The course integrates methodological training, substantive readings, and practical writing skills. Course content is divided into weekly units covering both technical skills and theoretical content. This course is demanding, but it's designed to give you the tools to write your first publishable article. I am here to guide you every step of the way.

This course introduces students to the political economy of artificial intelligence through four thematic modules: the foundations of technology and labor markets, the empirical evidence on automation and jobs, the macroeconomic consequences of AI for productivity and inequality, and the political and governmental responses to technological change. Students begin by examining competing explanations of how technology displaces and creates work through Autor, Acemoglu and Restrepo, and Frey and Osborne, then turn to the most recent empirical evidence on what robots and generative AI actually do to workers and firms, drawing on Acemoglu and Restrepo, Noy and Zhang, and Brynjolfsson, Li, and Raymond. The course then widens the lens to the economy as a whole, engaging debates over AI's effects on growth, productivity, and income distribution through Acemoglu, Aghion, Jones, and Jones, and Korinek and Stiglitz. It concludes with the politics and governance of AI—how automation reshapes voting behavior and how governments regulate and deploy these technologies—through Acemoglu and Johnson, Anelli, Colantone, and Stanig, and Gallego and Kurer. Throughout, students acquire foundational quantitative skills in R and apply them to labor market and survey data, culminating in an empirical research paper that connects theories of technological change to real-world economic and political outcomes.

Assessment will be based on the progressive development of a research project, including submission of a research question, proposal, outline, draft, and final paper, as well as in-class presentations. No prior experience with coding or statistics is required, but students should be ready to engage with challenging material in a supportive, step-by-step environment.

Learning Outcomes

Upon successful completion of this course the students will be able to:

- Develop a research question and transform it into a publishable paper.
- Master essential academic tools including reference managers (e.g., JabRef), markdown-based word processing, and professional presentation software.
- Write each section of a paper: abstract, introduction, argument, methods, literature review, findings, discussion, and conclusion.
- Conduct basic quantitative analysis in R, including data merging, regression modeling, and visualization.
- Understand and apply core methods in social science research, including qualitative methods, difference-in-differences (DiD), and regression discontinuity design (RDD).
- Create a personal academic website using GitHub Pages to showcase their work.

Weekly Presentations

Students will deliver a 20-minute presentation on a topic assigned in advance. Presentations should include a clear introduction, main points, and conclusion. Use visual aids (e.g., slides) effectively, ensuring text is legible and visuals are relevant. Practice beforehand to stay within the time limit and maintain a confident, professional tone. Be prepared to answer 2-3 questions from peers or the instructor during and after the presentation. Remember to cite your sources and avoid reading verbatim from slides or notes.

In addition to summarizing the key arguments or findings, your presentation should include critical analysis of the material. Highlight what the author does not address, the limitations of their research, or potential problems in their analysis or methodology. Think about how the research could be improved, expanded, or connected to broader themes discussed in class, and incorporate these insights into your presentation.

Each week, you will give a short presentation on that week's readings. You can download the template for the paper presentation at this link.

How weekly homework works: after each meeting, your homework has two components: (1) the slide decks listed under the current week, and (2) the readings listed under the *following* week. The readings must be completed before the next meeting — they are the basis of your weekly presentation and of our discussion.

Research Paper

The research paper should provide an extensive background on the topic and a clear contribution to the literature. The analysis should include some quantitative analysis to test hypotheses. The statistical part of the research project involves using data (collect and prepare the data to run quantitative analyses and produce graphs) and specialized software (R). For topics on AI, automation, and labor markets, rich publicly available data include the O*NET occupational database, the Current Population Survey (CPS), the American Community Survey (ACS), the OECD Employment Database, and the replication data accompanying the published studies on the syllabus.

The final paper should be approximately 15–20 pages double-spaced (somewhat shorter or longer is acceptable depending on the target journal's requirements) and should engage critically with the literature, citing at least 5–10 papers in the field.

Research Paper Template

Use the following as a starting point for writing your own research paper:

- Research Paper Template | Replication

Research Paper Examples

This section provides two complete examples of finished research papers and presentations. These are not templates to copy, but illustrations of different research designs. Use them to see how arguments, methods, and findings can be structured and communicated in practice.

- **Quantitative Example**
  - Research Paper (Quantitative) | Replication Files
  - Presentation (Quantitative) | Replication Files
- **Qualitative Example**
  - Research Paper (Qualitative) | Replication Files
  - Presentation (Qualitative) | Replication Files

Recommended Optional Books

Writing Articles

Coppedge, M. 2012. Democratization and Research Methods. Cambridge University Press.

Halperin, S., & Heath, O. (2012). Political Research: Methods and Practical Skills (3rd ed.). Oxford University Press.

Punch, K. F. 2014. Introduction to social research: Quantitative and qualitative approaches (3rd ed.). SAGE Publications.

Van Evera, S. 1997. Guide to methods for students of political science. Cornell University Press.

Statistics

Cunningham, Scott.2021. Causal Inference: The Mixtape. Yale University Press.https://mixtape.scunning.com.

Ismay, Chester, and Albert Y. Kim. 2019. *Statistical Inference via Data Science: A ModernDive into R and the Tidyverse.* Chapman and Hall / CRC. https://moderndive.com/.

Huntington-Klein, Nick. 2021. The Effect: An Introduction to Research Design and Causality. Boca Raton, Florida: Chapman and Hall / CRC. https://theeffectbook.net/.

Llaudet, Elena and Imai, Kosuke. 2023 "Data Analysis for Social Science." Princeton: Oxford University Press.

Warne, Russel T. 2018. "Statistics for the Social Sciences. A General Linear Model Approach." London: Cambridge University Press.

Causal Inference

Bauer, Paul C. and Dennis Cohen. 2023. *Applied Causal Analysis* (*with R*) https://bookdown.org/paul/applied-causal-analysis/.

Keyes, David, R for the Rest of Us: 2025. *A Statistics-Free Introduction* https://book.rfortherestofus.com. No Starch Press

Geographic Information Systems (GIS)

Lovelace, Robin, Nowosad, Jakub, and Jannes Muenchow. 2021. *Geocomputation with R*. https://bookdown.org/robinlovelace/geocompr/.

Mieno, Tara. 2023. *R as GIS for Economists*. https://tmieno2.github.io/R-as-GIS-for-Economists/.

Week 1

- Intro to the Course - 2026-06-06

Homework 1: Research Design and Presentation: Go over:

- The Topic and Research Question Slides
- Quarto Presentations Slides

Homework 2: Statistics and R Programming: Go over:

- Operations and Objects in R Slides
- Intro to Statistics Slides

Homework 3: Readings: Read the Week 2 readings (listed below) and prepare a short presentation on them for the Week 2 meeting.

Week 2

Foundations: Technology, Work, and Labor Markets - 2026-06-11

- Autor, David H. 2015. "Why Are There Still So Many Jobs? The History and Future of Workplace Automation." Journal of Economic Perspectives 29 (3): 3–30. [PDF]
- Acemoglu, Daron, and Pascual Restrepo. 2019. "Automation and New Tasks: How Technology Displaces and Reinstates Labor." Journal of Economic Perspectives 33 (2): 3–30. [PDF]
- Frey, Carl Benedikt, and Michael A. Osborne. 2017. "The Future of Employment: How Susceptible Are Jobs to Computerisation?" Technological Forecasting and Social Change 114: 254–280. [PDF]

Homework 1: Research Design and Presentation: Go over:

- **Essential Tools for Writing a Paper Slides**

- The Abstract and the Argument Slides

Homework 2: Statistics and R Programming: Go over:

- Working with Data in R Slides
- Dplyr and Basic Visualization Slides

Homework 3: Readings: Read the Week 3 readings (listed below) and prepare a short presentation on them for the Week 3 meeting.

Deadline: Syllabus - 2026-06-12

Deadline: Research Question - 2026-06-19

Week 3

Automation, AI, and Jobs: The Empirical Evidence - 2026-06-20

- Acemoglu, Daron, and Pascual Restrepo. 2020. "Robots and Jobs: Evidence from US Labor Markets." Journal of Political Economy 128 (6): 2188–2244. [PDF]
- Noy, Shakked, and Whitney Zhang. 2023. "Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence." Science 381 (6654): 187–192. [PDF]
- Brynjolfsson, Erik, Danielle Li, and Lindsey R. Raymond. 2025. "Generative AI at Work." Quarterly Journal of Economics 140 (2): 889–942. [PDF]

Homework 1: Research Design and Presentation: Go over:

- Literature Review Slides
- Writing the Research Proposal: question, hypotheses literature, methods

Homework 2: Statistics and R Programming: Go over:

- Visualizing Data Distributions in R Slides
- Modeling Relationships Between Variables Slides

Homework 3: Readings: Read the Week 4 readings (listed below) and prepare a short presentation on them for the Week 4 meeting.

Deadline: Research Proposal - 2026-06-26

Week 4

AI and the Economy: Growth, Productivity, and Inequality - 2026-06-27

- Acemoglu, Daron. 2025. "The Simple Macroeconomics of AI." Economic Policy 40 (121): 13–58. [PDF]
- Aghion, Philippe, Benjamin F. Jones, and Charles I. Jones. 2019. "Artificial Intelligence and Economic Growth." In The Economics of Artificial Intelligence: An Agenda, edited by Ajay Agrawal, Joshua Gans, and Avi Goldfarb, 237–282. Chicago: University of Chicago Press. [PDF]
- Korinek, Anton, and Joseph E. Stiglitz. 2019. "Artificial Intelligence and Its Implications for Income Distribution and Unemployment." In The Economics of Artificial Intelligence: An Agenda, edited by Ajay Agrawal, Joshua Gans, and Avi Goldfarb, 349–390. Chicago: University of Chicago Press. [PDF]

Homework 1: Statistics and R Programming: Go over:

- Interpreting Binary and Multivariate Regression Models Slides
- Differences-in-Differences Slides
- Data Visualization in R - 1 Slides

Homework 2: Readings: Read the Week 5 readings (listed below) and prepare a short presentation on them for the Week 5 meeting.

Deadline: Research Paper Outline - 2026-07-03

Week 5

AI, Government, and Politics - 2026-07-04

- Acemoglu, Daron, and Simon Johnson. 2023. Power and Progress: Our Thousand-Year Struggle over Technology and Prosperity. New York: PublicAffairs. C1 [PDF]
- Anelli, Massimo, Italo Colantone, and Piero Stanig. 2021. "Individual Vulnerability to Industrial Robot Adoption Increases Support for the Radical Right." Proceedings of the National Academy of Sciences 118 (47): e2111611118. [PDF]
- Gallego, Aina, and Thomas Kurer. 2022. "Automation, Digitalization, and Artificial Intelligence in the Workplace: Implications for Political Behavior." Annual Review of Political Science 25: 463–484. [PDF]

Homework 1: Research Design and Presentation: Go over:

- Methods Slides
- Writing the Paper Outline

Homework 2: Statistics and R Programming: Go over:

- Regression Discontinuity Design Slides

- Data Visualization in R - 2 Slides
- Data Visualization in R - 3 Slides

Week 6

Replication: Difference-in-Differences - 2026-07-11

Homework 1: Research Design and Presentation: Go over:

- Findings, Discussion, Intro, and Conclusion Slides
- Making a website on GitHub: `username.github.io`

Deadline: Milestone - 2026-07-17

Week 7

Replication: Regression Discontinuity Design - 2026-07-18

Homework: Write:

- Work on Research Design, Data, Research Methodology

Week 8

Paper Development - 2026-07-25

Homework: Write:

- Work on Research Design, Data, Research Methodology
- Finish First Draft

Deadline: First Draft - 2026-07-31

Week 9

Paper Feedback - 2026-08-01

- Writing an academic CV and publishing on your personal website
- CV template:

  - tex file (open the tex file in quarto and compile after updating it with personal details)
  - pdf file

Homework: Write:

- Revise Paper: Methods
- Write academic CV and post on website

Week 10

Paper Development - 2026-08-08

Deadline: Revised Final Paper - 2026-08-21