

# Democracy's Data: Analytics and Insights into American Elections

[84-355] – Fall 2024

Updated: August 26, 2024

Professor Jonathan Cervas

Email: [cervas@cmu.edu](mailto:cervas@cmu.edu)

Location: POS 145

Time: Tuesday 11:00a-12:20p Eastern

Office Hours: Tuesday 3:30p-4:30p, Wednesday 2-3p, and by appointment (arrange via email)

CMU Academic Calendar

**THIS COURSE SYLLABUS IS A WORK IN PROGRESS. THE INSTRUCTOR WILL TAKE NOTE OF STUDENT FEEDBACK AND COURSE SCHEDULE WILL EVOLVE BASED ON STUDENT PREFERENCES**

## **Short Description:**

This course offers a comprehensive exploration of democracy through a data-driven lens, revealing the complex dynamics that shape our political system. By analyzing quantitative information, students will gain critical insights into the principles and practices that underlie democratic institutions.

## **Course Description:**

This course is designed with the idea that our Democracy can best be understood with data. "Democracy's Data: Analytics and Insights into American Elections" offers a unique blend of political science and data analytics, focusing on the American electoral process with a special emphasis on contemporary elections. This course bridges historical electoral outcomes with current political events, highlighting how understanding past elections is key to interpreting the dynamics of present and future elections. This course recognizes a common observation: people often view the next election as the most consequential. However, history tells us that the impact of elections can be profound and long-lasting. From the pivotal election of 1876, which ended Reconstruction and reshaped the country for a century, to the razor-thin margins in the 1960 Kennedy election and the 2000 Bush-Gore contest, American politics have been deeply influenced by electoral outcomes.

Throughout the semester, students will delve into data analytics' foundational concepts, focusing on data collection, statistical analysis, and interpretation. These techniques are applied to contemporary election trends, voter behavior, and political campaigning. The course uses historical elections as case studies to illustrate how past events and trends can shed light on current electoral phenomena.

The curriculum emphasizes the significance of historical context in shaping our understanding of today's elections. Students will explore how factors such as changing voter demographics, technological advancements in campaigning, and shifts in political ideologies have evolved over time and what they mean for current and future electoral strategies and outcomes.

Hands-on projects with real electoral data sets will enable students to apply their analytical skills to contemporary election scenarios. This approach enhances their ability to discern patterns and draw meaningful conclusions about modern political campaigns and voter behavior.

## Course Goals

By the end of the course, students will be able to frame questions related to American elections, such as how do candidates emerge, why do some candidates succeed while others fail, when do elections fundamentally change the course of history, and who votes and why? Students will be able to utilize diverse electoral data sources to analyze trends and patterns in American electoral behavior and outcomes. Using that data, students will be able to make connections between and across elections across the last several decades to explain how they have led to recent electoral outcomes. Students will be asked to reflect critically on personal perspectives regarding American elections in light of historical, cultural, and political contexts.

---

**Prerequisites:** 36-200 Reasoning with Data

**Course Relevance:** DC: Perspectives on Justice and Injustice

---

## Assignments

### 1. Reflective Diary Entries:

Each week, you will write a brief reflection on current events, particularly those related to topics discussed in class. These essays should be concise, typically one to two paragraphs. They will be private to you and the instructor. They will be graded on a completion basis (complete/incomplete). You are required to submit essays for 12 out of the 14 weeks.

### 2. Data Contributions:

For each class, you must submit one piece of relevant data on the Canvas discussion board. This data should be pertinent to the upcoming class discussion and reflect current events. You can access free articles and archives from the New York Times and other major newspapers using your cmu.edu email. You may be called on randomly to share your data nugget. Discussion board will be open to the class. They will be graded on a completion basis (complete/incomplete).

#### **Example:**

*Voter Turnout:* "About two-thirds (66%) of the voting-eligible population turned out for the 2020 presidential election" **Pew Research Center**.

Submissions will be graded as complete/incomplete. You must complete 20 submissions to receive full credit.

### 3. Historical Election Case Studies:

You will analyze two specific historical elections, focusing on aspects such as campaign strategies, media impact, voter behavior, or the role of money in politics. Your case study should include a detailed report (3-5 pages, single-spaced) and a class presentation. The collected case studies will contribute to the creation of an "Atlas of American Presidential Elections, 1868-2024," which we will collaboratively design in class and prepare for public release.

4. **Data Problem Sets:**

Create compelling data visualizations (charts, graphs, interactive maps) that illustrate an aspect of the electoral process. These will often cover multiple time periods to establish a time series, focusing on themes like demographic shifts, geographic voting patterns, or changes in political alignment over time. These will typically be done in-class and are not scheduled in advance. You will be permitted to complete the work in subsequent days after class. (Work individually or in teams of up to three persons.) They will be graded on a completion basis (complete/incomplete).

5. **Data Analysis Projects:**

Select two topics from the class syllabus (e.g., voter turnout, demographic patterns, polling data). Collect relevant data for each topic and conduct a thorough analysis to uncover significant findings or patterns. Your analysis should include statistical evaluation, data visualization, and a detailed interpretation of your results. These can be extensions of the Data Visualization Projects. You are permitted to replicate the analysis from an academic paper with a research topic relevant to the course. You should provide a research question and any context, including from academic or non-academic literature, to situate your research. (Due October 13 and November 26. Reports should be 1-2 pages, single-spaced, excluding visualizations.)

6. **Policy Proposals:**

Develop a policy proposal that addresses a specific issue in the electoral process, such as increasing voter turnout, ensuring election security, or improving poll accuracy. Your proposal should be supported by data and historical analysis. (Due December 5. 2-4 single-spaced pages, not including visualizations).

You will be responsible for reading two of your peer's work, and providing feedback. You will also provide a grade, which I will average. If you feel you deserve a different grade, I am happy to evaluate it before the end of the semester. However, I reserve the right to lower the grade as I see fit.

7. **Attendance:**

Regular attendance is expected for each class. You may miss up to two classes without penalty and still receive full credit.

The course grade will be a weighted average of the following components:

Category	Percent of Final Grade
Diary Entries	10%
Data Contributions	15%
Historical Election Case Studies	20%
Data Problem Sets	10%
Data Analysis Projects	20%
Policy Proposals	15%
Attendance	10%

## Course Schedule (Subject to Change as Semester Progresses):

### August 27

- Convention Bounce: Analyzing the short-term effects of political conventions on candidate polling and election outcomes.
  - **Reading:** "Does the Post-Convention Polling Bump Still Exist in Modern Politics?," Tess Bonn. August 22, 2024. Katie Couric Media. **Available Online**

- \* **Optional:** “Can a political party get any attention when its rival holds a national convention? Yes, but it’s not easy,” The Conversation. August 22, 2024. **Available Online**
- \* **Optional:** “Convention Bumps Revisited,” Tom Holbrook. August 10, 2020 **Available Online**
- \* **Optional:** “Why Counting On A Convention Bounce This Year Is Risky,” Geoffrey Skelley. July 6, 2020. FiveThirtyEight. **Available Online**

## August 29

- Public Opinion Polling: Methods and accuracy in predicting election results.
  - **Reading:** Bailey, Michael A. 2024. Polling at a Crossroads: Rethinking Modern Survey Research. Cambridge: Cambridge University Press. [**Available On Canvas**]. [Pages 3–22]
  - **Reading:** “Understanding the Margin of Error in Election Polls,” Pew Research Center (2016). **Available Online**

## September 3

- Election Forecasting Models: Exploring different models used to predict election outcomes and their accuracy.
  - **Readings:** “How 538’s 2024 presidential election forecast works”, G. Elliott Morris. August 23, 2024, FiveThirtyEight. **Available Online**
  - **Reading:** “2024 presidential election model methodology update,” Nate Silver. June 26, 2024. Silver Bulletin. **Available Online**
    - \* **Optional:** “The Signal and the Noise: Why So Many Predictions Fail—but Some Don’t” by Nate Silver (2012). Penguin Press.

## September 5

- Demographic Shifts and Electoral Change: Exploring how changes in population demographics affect voting patterns and party strategies.
  - **Reading:** “Changing Partisan Coalitions in a Politically Divided Nation,” Pew Research Center. **Available Online**

## September 10

- Red and Blue States: Statistical examination of political partisanship at the state level.
  - **Reading:** Levendusky, Matthew S., and Jeremy C. Pope. 2011. “Red States vs. Blue States: Going Beyond the Mean.” Public Opinion Quarterly 75(2): 227–248. **Available Online**
    - \* **Optional:** Gelman, Andrew. 2007. “Rich State, Poor State, Red State, Blue State: What’s the Matter with Connecticut?” Quarterly Journal of Political Science 2(4): 345–367. **Available Online**
    - \* **Optional:** Furrer, Rémy A., Karen Schloss, Gary Lupyan, Paula M. Niedenthal, et al. 2023. “Red and blue states: dichotomized maps mislead and reduce perceived voting influence.” Cognitive Research: Principles and Implications 8: 11. **Available Online**
    - \* **Optional:** Baum, Matthew A. 2011. “Red State, Blue State, Flu State: Media Self-Selection and Partisan Gaps in Swine Flu Vaccinations.” Journal of Health Politics, Policy and Law 36(6): 1021–1059. **Available Online**

- \* **Optional:** Hacker, Jacob S., Amelia Malpas, Paul Pierson, and Sam Zacher. 2023. "Bridging the Blue Divide: The Democrats' New Metro Coalition and the Unexpected Prominence of Redistribution." *Perspectives on Politics*: 1–21. **Available Online**

## September 12

- The Electoral College vs. Popular Vote: Statistical comparison of outcomes and potential disparities.
  - **Reading:** Cervas, Jonathan R., and Bernard Grofman. 2019. "Are Presidential Inversions Inevitable? Comparing Eight Counterfactual Rules for Electing the U.S. President." *Social Science Quarterly* 100(4): 1322–1342. **Available Online**
  - \* **Optional:** "Why Do We Still Have the Electoral College?" by Alexander Keyssar (2020). Harvard University Press.

## September 17

- Incumbency Effects: Statistical analysis of the advantages and disadvantages of incumbency in elections, including success rates and voter behavior.
  - **Reading:** Jacobson, Gary C. 2015. "It's Nothing Personal: The Decline of the Incumbency Advantage in US House Elections." *The Journal of Politics* 77(3): 861–873. **Available Online**
  - \* **Data Source:** **Available Online**

## September 19

- Statistical Fallacies related to voting
  - **Reading:** Grofman, Bernard, and Jonathan Cervas. 2024. "Statistical Fallacies in Claims about 'Massive and Widespread Fraud' in the 2020 Presidential Election: Examining Claims Based on Aggregate Election Results." *Statistics and Public Policy* 11(1): 2289529. **Available Online**

## September 24

- The Impact of Convenience Voting: Analyzing trends and outcomes in states with different voting policies.
  - **Reading:** Gronke, Paul, Eva Galanes-Rosenbaum, Peter A. Miller, and Daniel Toffey. 2008. "Convenience Voting." *Annual Review of Political Science* 11(1): 437–455. **Available Online**
  - \* **Optional:** Johnson, Martin, and Robert M. Stein. 2023. "Mitigating the Turnout Effects of Bad Weather With Early Voting: 1948–2016." *American Politics Research* 51(2): 197–209. **Available Online**
  - \* **Optional:** Gomez, Brad T., Thomas G. Hansford, and George A. Krause. 2007. "The Republicans Should Pray for Rain: Weather, Turnout, and Voting in U.S. Presidential Elections." *The Journal of Politics* 69(3): 649–663. **Available Online**
  - \* **Optional:** Dehdari, Sirus H., Mathilde M. van Ditmars, Karl-Oskar Lindgren, Sven Oskarsson, et al. 2024. "Early voting can widen the turnout gap: The case of childbirth." *Electoral Studies* 90: 102817. **Available Online**

## September 26

- The Role of Political Advertising: Data analysis on the effectiveness of different types of political ads.
  - **Readings:** Gerber, Alan S., James G. Gimpel, Donald P. Green, and Daron R. Shaw. 2011. “How Large and Long-lasting Are the Persuasive Effects of Televised Campaign Ads? Results from a Randomized Field Experiment.” *American Political Science Review* 105(1): 135–150. **Available Online.**
  - \* **Optional:** Green, Donald P. et al. 2016. “The effects of lawn signs on vote outcomes: Results from four randomized field experiments.” *Electoral Studies* 41: 143–150. **Available Online.**

## October 1

- Campaign Finance and Election Outcomes: Data-driven exploration of the influence of money in politics.
  - **Reading:** Gilens, Martin, Shawn Patterson, and Pavielle Haines. 2021. “Campaign Finance Regulations and Public Policy.” *American Political Science Review* 115(3): 1074–1081. **Available Online**
  - \* **Optional:** Grumbach, Jacob M., and Alexander Sahn. 2020. “Race and Representation in Campaign Finance.” *American Political Science Review* 114(1): 206–221. **Available Online**
  - \* **Optional:** Albert, Zachary et al. 2024. “Election reform and campaign finance: Did Alaska’s top 4 nonpartisan primaries and ranked-choice general elections affect political spending?” *Social Science Quarterly*: ssqu.13422. **Available Online**
  - \* **Optional:** Alvarez, R. Michael, Jonathan N. Katz, and Seo-young Silvia Kim. 2020. “Hidden Donors: The Censoring Problem in U.S. Federal Campaign Finance Data.” *Election Law Journal: Rules, Politics, and Policy* 19(1): 1–18. **Available Online**

## October 3

- Media Bias and Its Influence: Examine the impact of media bias on public opinion and voter behavior, including quantitative analysis of media coverage during elections.
  - **Reading:** Groeling, Tim. 2008. “Who’s the Fairest of them All? An Empirical Test for Partisan Bias on ABC, CBS, NBC, and Fox News.” *Presidential Studies Quarterly* 38(4): 631–657. **Available Online**
  - **Optional:** Dellavigna, Stefano, and Ethan Kaplan. “The Fox News Effect: Media Bias And Voting.” *Quarterly Journal of Economics*: 48.

## October 8

- Partisanship and Nationalization
  - **Reading:** Amlani, Sharif, and Carlos Algara. 2021. “Partisanship & nationalization in American elections: Evidence from presidential, senatorial, & gubernatorial elections in the U.S. counties, 1872–2020.” *Electoral Studies* 73: 102387. **Available Online.**
  - \* **Replication** Algara, Carlos; Sharif Amlani, 2021, “Replication Data for: Partisanship & Nationalization in American Elections: Evidence from Presidential, Senatorial, & Gubernatorial Elections in the U.S. Counties, 1872–2020”, <https://doi.org/10.7910/DVN/DGUMFI>, Harvard Dataverse, V1, UNF:6:glfQoiLzpXDGTfErebfbIQ== [fileUNF]

October 10

FALL BREAK October 14 through October 18

October 22

- Voter Mobilization Strategies: Study the effectiveness of different voter mobilization strategies, such as grassroots campaigns, phone banking, and digital outreach.
  - **Reading:** Wlezien, Christopher, and Robert S. Erikson. 2002. "The Timeline of Presidential Election Campaigns." *The Journal of Politics* 64(4): 969–993. **Available Online**
  - \* **Optional:** Dale, Allison, and Aaron Strauss. 2009. "Don't Forget to Vote: Text Message Reminders as a Mobilization Tool." *American Journal of Political Science* 53(4): 787–804. **Available Online**
  - \* **Optional:** Stevens, Daniel, and Benjamin G. Bishin. 2011. "Getting Out the Vote: Minority Mobilization in a Presidential Election." *Political Behavior* 33(1): 113–138. **Available Online**
  - \* **Optional:** Enos, Ryan D., Anthony Fowler, and Lynn Vavreck. 2014. "Increasing Inequality: The Effect of GOTV Mobilization on the Composition of the Electorate." *The Journal of Politics* 76(1): 273–288. **Available Online**

October 24

- The Parties in Our Heads
  - **Readings:** Ahler, Douglas J., and Gaurav Sood. 2018. "The Parties in Our Heads: Misperceptions about Party Composition and Their Consequences." *The Journal of Politics* 80(3): 964–981. **Available Online**

October 29

- Voter Turnout: Analyzing trends and patterns in voter participation across different demographic groups.
  - **Reading:** "Voter turnout, 2018–2022," **Available Online**
  - \* **Data Source:** Univ. of Florida Election Lab
  - \* **Optional:** Bryant, Lisa A., Michael J. Hanmer, Alauna C. Safarpour, and Jared McDonald. 2022. "The Power of the State: How Postcards from the State Increased Registration and Turnout in Pennsylvania." *Political Behavior* 44(2): 535–549. **Available Online**

October 31

- Voter Suppression Tactics: Analyzing the impact of voter ID laws, purges, and other barriers to voting.
  - **Reading:** Highton, Benjamin. 2017. "Voter Identification Laws and Turnout in the United States." *Annual Review of Political Science* 20(1): 149–167. **Available Online**
  - \* **Optional:** Harden, Jeffrey J., and Alejandra Campos. 2023. "Who benefits from voter identification laws?" *Proceedings of the National Academy of Sciences* 120(7): e2217323120. **Available Online**

- \* **Optional:** Grimmer, Justin, and Jesse Yoder. 2022. "The durable differential deterrent effects of strict photo identification laws." *Political Science Research and Methods* 10(3): 453–469. **Available Online**
- \* **Optional:** Hopkins, Daniel J., Marc Meredith, Anjali Chainani, and Nathaniel Olin. 2022. "Whose Vote Is Lost by Mail? Evidence from Philadelphia in the 2020 General Election." *Election Law Journal: Rules, Politics, and Policy* 21(4): 329–348. **Available Online**
- \* **Optional:** Cantoni, Enrico, and Vincent Pons. 2021. "Strict Id Laws Don't Stop Voters: Evidence from a U.S. Nationwide Panel, 2008–2018." *The Quarterly Journal of Economics* 136(4): 2615–2660. **Available Online**

**November 5 - DEMOCRACY DAY, no class (Register to Vote: <https://www.cmu.edu/student-affairs/slice/civic-engagement/advocacy/voter/index.html>)**

Join us for CMU's second Democracy Day, an opportunity to focus on our institutional commitment to civic service and democracy on Election Day. There will be programming and resources available throughout the day for our entire community to engage on the key ideals of democracy. There are no classes on Democracy Day prior to 5 p.m. and the entire CMU community—faculty, staff and students—is encouraged to participate as their schedules allow.

#### **November 7**

- The 2024 Election Discussion (No Readings)

#### **November 12**

- The Role of Social Media in Elections: Analyzing the data on how social media influences voter behavior and election outcomes.
  - **Reading:** Zhuravskaya, Ekaterina, Maria Petrova, and Ruben Enikolopov. 2020. "Political Effects of the Internet and Social Media." *Annual Review of Economics* 12(Volume 12, 2020): 415–438. **Available Online**

#### **November 14**

- Voting Technology and Election Security: Analyzing the risks and benefits of different voting systems.
  - **Reading:** Charles Stewart III. 2011. "Voting Technologies." *Annual Review of Political Science* 14(Volume 14, 2011): 353–378. **Available Online**
  - \* **Optional:** Clark, Jesse T. 2021. "Lost in the Mail? Vote by Mail and Voter Confidence." *Election Law Journal: Rules, Politics, and Policy* 20(4): 382–394. **Available Online**

#### **November 19**

- Civic Education and Voter Knowledge: Explore the relationship between civic education, voter knowledge, and political engagement, including the impact of education initiatives on voter turnout.
  - **Reading:** Galston, William A. 2001. "Political Knowledge, Political Engagement, and Civic Education." *Annual Review of Political Science* 4(1): 217–234. **Available Online**



## November 21

- Malapportionment
  - **Reading:** Cervas, Jonathan, and Bernard Grofman. 2020. "Legal, Political Science, and Economics Approaches to Measuring Malapportionment: The U.S. House, Senate, and Electoral College 1790–2010." *Social Science Quarterly* 101(6): 2238–2256. **Available Online**
  - \* **Optional:** Ladewig, Jeffrey W. 2011. "One Person, One Vote, 435 Seats: Interstate Malapportionment and Constitutional Requirements." *Connecticut Law Review* 43(4): 1125–1156.
  - \* **Optional:** Grofman, Bernard, William Koetzle, and Thomas Brunell. 1997. "An integrated perspective on the three potential sources of partisan bias: Malapportionment, turnout differences, and the geographic distribution of party vote shares." *Electoral Studies* 16(4): 457–470. **Available Online**

## November 26

- Racially Polarized Voting: Examining voting patterns across racial groups and how these impact election results.
  - **Reading:** "Growing Racial Disparities in Voter Turnout, 2008–2022," Kevin Morris and Coryn Grange. March 2, 2024. Brennan Center for Justice. **Available Online**

## November 28 - THANKSGIVING DAY, no class

## December 3

- Gerrymandering and Its Impact: Quantitative analysis of how district boundaries influence election outcomes.
  - **Reading:** McGhee, Eric. 2020. "Partisan Gerrymandering and Political Science." *Annual Review of Political Science* 23(1): 171–185. **Available Online**
  - \* **Optional:** Eubank, Nicholas, and Jonathan Rodden. 2020. "Who Is My Neighbor? The Spatial Efficiency of Partisanship." *Statistics and Public Policy* 7(1): 87–100. **Available Online**

## December 5 - Final Class

- Are we really divided? What's the evidence?
  - **Reading:** "The Growing Evidence That Americans Are Less Divided Than You May Think," Karl Vick. July 2, 2024. *Time Magazine*. **Available Online**

---

## Diversity Statement

I am committed to a diversity of representation in readings for this course. If you feel like there is a voice that I have missed, please make a suggestion so I can improve the syllabus and this course for both this semester and future iterations.

**We must treat every individual with respect.** We are diverse in many ways, and this diversity is fundamental to building and maintaining an equitable and inclusive campus community. Diversity can refer to multiple ways that we identify ourselves, including but not limited to race, color, national origin, language, sex, disability, age,

sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. Each of these diverse identities, along with many others not mentioned here, shape the perspectives our students, faculty, and staff bring to our campus. We, at CMU, will work to promote diversity, equity and inclusion not only because diversity fuels excellence and innovation, but because we want to pursue justice. We acknowledge our imperfections while we also fully commit to the work, inside and outside of our classrooms, of building and sustaining a campus community that increasingly embraces these core values.

Each of us is responsible for creating a safer, more inclusive environment.

Unfortunately, incidents of bias or discrimination do occur, whether intentional or unintentional. They contribute to creating an unwelcoming environment for individuals and groups at the university. Therefore, the university encourages anyone who experiences or observes unfair or hostile treatment on the basis of identity to speak out for justice and support, within the moment of the incident or after the incident has passed. Anyone can share these experiences using the following resources:

**Center for Student Diversity and Inclusion:** [csdi@andrew.cmu.edu](mailto:csdi@andrew.cmu.edu), (412) 268-2150

**Ethics Reporting Hotline.** Students, faculty, and staff can anonymously file a report by calling 844-587-0793 or visiting [cmu.ethicspoint.com](http://cmu.ethicspoint.com). All reports will be documented and deliberated to determine if there should be any following actions. Regardless of incident type, the university will use all shared experiences to transform our campus climate to be more equitable and just.

### **Accommodations for Students with Disabilities**

If you have a disability and have an accommodations letter from the Disability Resources office, I encourage you to discuss your accommodations and needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at [access@andrew.cmu.edu](mailto:access@andrew.cmu.edu).

### **Student well-being**

The last few years have been challenging. We are all under a lot of stress and uncertainty at this time. I encourage you to find ways to move regularly, eat well, and reach out to your support system or me [cervas@cmu.edu](mailto:cervas@cmu.edu) if you need to. We can all benefit from support in times of stress, and this semester is no exception.

As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. CMU services are available, and treatment does work. You can learn more about confidential mental health services available on campus at: <http://www.cmu.edu/counseling/>. Support is always available (24/7) from Counseling and Psychological Services: 412-268-2922.