**Megan K. Ayers**

New Haven, CT | m.ayers@yale.edu | 208-914-4941

## RESEARCH INTERESTS

Causal inference, environmental impact evaluation, experimental design, remote sensing, machine learning, text as data, computational social science, social and environmental applications of statistics

## EDUCATION

*Ph.D. in Statistics & Data Science*, **Yale University**, 2026 (expected)

- Advanced to candidacy May 2023
- Dissertation: *Causal Inference in Complex Settings: Innovations and Perspectives for Textual and Environmental Contexts*

*M.A. in Statistics & Data Science*, **Yale University**, 2024

*B.A. in Mathematics, B.A. in Physics*, **Lewis & Clark College**, 2019

- Summa Cum Laude, Phi Beta Kappa, Pi Mu Epsilon
- GPA: 3.98/4.00

## PUBLICATIONS

### PEER REVIEWED JOURNAL PUBLICATIONS

**Ayers, M.**, Marlon, J. R., Ballew, M. T., Maibach, E. W., Rosenthal, S. A., Roser-Renouf, C., & Leiserowitz, A. (2024). Changes in Global Warming's Six Americas: An analysis of repeat respondents. *Climatic Change*, *177*(6), 96. https://doi.org/10.1007/s10584-024-03754-x

Liu, T., Gezari, S., **Ayers, M.**, Burgett, W., Chambers, K., Hodapp, K., Huber, M. E., Kudritzki, R.-P., Metcalfe, N., Tonry, J., Wainscoat, R., & Waters, C. (2019). Supermassive Black Hole Binary Candidates from the Pan-STARRS1 Medium Deep Survey. *The Astrophysical Journal*, *884*(1), 36. https://doi.org/10.3847/1538-4357/ab40cb

Foord, A., Gültekin, K., Reynolds, M., **Ayers, M.**, Liu, T., Gezari, S., & Runnoe, J. (2017). A Multi-wavelength Analysis of Binary-AGN Candidate PSO J334.2028+01.4075. *The Astrophysical Journal*, *851*(2), 106. https://doi.org/10.3847/1538-4357/aa9a39

### CONFERENCE & WORKSHOP PUBLICATIONS

**Ayers, M.**[*], Sanford, L.[*], Roberts, M. E., & Yang, E. (2024). Discovering influential text using convolutional neural networks. *Findings of the Association for Computational Linguistics*, pages 12002–12027, Bangkok, Thailand and virtual meeting.
[*]*Equal contribution*

Gordon, M., **Ayers, M.**, Stone, E., & Sanford, L. (2023). Remote Control: Debiasing Remote Sensing Predictions for Causal Inference. *Proc. Int. Conf. Learn. Represent. Workshops*, Kigali, Rwanda and virtual meeting.

### IN PROGRESS

**Ayers, M.**, Gardner, W., Kuebbing, S., & Sanford, L. (2024). Aligning Carbon Offsetting with Causal Inference: Baseline Estimation and Additionality within the Potential Outcomes Framework.

## TEACHING & MENTORING EXPERIENCE

*Teaching Fellow,* **Yale University**, 2021-2024

- Statistical Case Studies (Fall 2022, Fall 2024)
- Data Analysis (Spring 2022, Spring 2023)

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- Statistical Computing (Fall 2022)
- Linear Models (Fall 2021)

*Grader without Contact,* **Yale University**, 2023-present
- Statistical Consulting (Spring 2023, Fall 2023, Spring 2024, Fall 2024)

*Certificate of College Teaching Preparation Program*, **Yale University**, expected Spring 2025
- Intermediate Teaching Workshop on Mental Health in the Classroom, Fall 2024
- Intermediate Teaching Workshop on Teaching Quantitative Reasoning, Spring 2024
- Fundamentals of Equitable Teaching four-part workshop series, Spring 2024

*Peer Tutor in Math & Physics*, **Lewis & Clark College**, 2016-2019

*Math Department Grader*, **Lewis & Clark College**, 2016-2019
- Partial Differential Equations with Applications (Spring 2019)
- Linear Algebra (Fall 2018)
- Differential Equations (Fall 2017)
- Calculus I (Fall 2016, Spring 2017)

## FELLOWSHIPS & AWARDS

2023-2024 Planetary Solutions Project seed grant from the Climate Impact Innovation Fund and the Gordon Data and Environmental Sciences Research Grant (research assistant funding recipient), **Yale University**

2023 Graduate Student Assembly Conference Travel Fellowship, **Yale University**

2020 Sterling Prize Fellowship, **Yale University**

2018 Shannon T. O'Leary Award, **Lewis & Clark College**

## PRESENTATIONS

2024 "Discovering influential text using convolutional neural networks," **Association for Computational Linguistics**, August 12-14 and August 22, Bangkok, Thailand and virtual meeting. (Virtual poster)

"A New Perspective for Forest Carbon Offsetting through the Potential Outcomes Framework," **American Causal Inference Conference Annual Meeting**, May 14-17, Seattle, WA. (Poster)

"Site Matching Baselines with Real and Synthetic Controls," **Workshop on Increasing Consensus on Best Practices for Additionality & Baselines in Forest Carbon Crediting Accounting**, April 11-12, Yale University. (Oral)

2023 "Assessing Leakage from Carbon Offset Projects," **Google Geo for Good Summit**, October 10-12, Mountain View, CA. (Oral)

"Remote Control: Debiasing Remote Sensing Predictions for Causal Inference," **The Workshop in Environmental Economics and Data Science**, September 15-16, Portland, OR. (Oral, presented by a colleague for health reasons)

"Remote Control: Debiasing Remote Sensing Predictions for Causal Inference," **ICLR Workshop on Machine Learning for Remote Sensing**, May 5, Kigali, Rwanda and Virtual meeting. (Virtual oral)

"Remote Control: Debiasing Remote Sensing Predictions for Causal Inference," **ICLR Workshop on Tackling Climate Change with Machine Learning**, May 4, Kigali, Rwanda and virtual meeting. (Virtual poster)

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## RESEARCH & PROFESSIONAL EXPERIENCE

**Yale Center for Environmental Law & Policy** New Haven, CT
*Summer Research Assistant* June-August 2022

- Designed the "EPI Weighting Explorer" Tableau dashboard to accompany the 2022 Environmental Performance Index Report, allowing readers to explore EPI scores and rankings when indicator weights are adjusted. As of August 2024, the dashboard has reached over 11,000 views

**Yale Law School Legal Services Organization** New Haven, CT
*Statistical/Data Analyst* November 2020-March 2021

- Collaborated with law students in the Veterans Legal Services Clinic to prepare a report examining ethnic/racial disparities in congressional nominations to the U.S. Military Service Academies

**Cascade Data Labs** Portland, OR
*Data Analyst* June 2019-May 2020

- Utilized eCommerce data to provide business insights to clients through interactive data tools and ad hoc analyses
- Communicated technical concepts to clients with varying backgrounds and collaborated with teams of stakeholders to tailor data products to clients' needs

**Yale University Sackler NSF-REU** New Haven, CT
*Research Intern (Emonet Lab)* May-August 2018

- Developed MATLAB code to conduct and analyze agent-based simulations of E. coli cells

**Maria Mitchell Observatory NSF-REU** Nantucket, MA
*Research Intern* May-August 2017

- Constructed and analyzed quasar energy distributions for research on supermassive black hole binaries
- Operated 24" research telescope to contribute 14 nights of data for observational research of variable star MWC 349
- Engaged with public during open nights attended by over 2250 guests and led weekly informational tours of historical observatory

## SERVICE

Ad-hoc reviewer, *Climatic Change*, 2024

Workshop organizer, Workshop on Increasing Consensus on Best Practices for Additionality & Baselines in Forest Carbon Crediting Accounting, 2024

Undergraduate Learning Assistant hiring coordinator, Yale University Department of Statistics & Data Science, 2021-2022