CLAIRE MORTON

EDUCATION

Bachelor's Degree, Stanford University, GPA: 4.15, Phi Beta Kappa (Junior Year): 2024
Graduated with departmental honors and distinction
Major: Mathematical and Computational Science, Minor: Environmental Justice

SKILLS

- Proficient in Python, R, R Shiny, Julia, MATLAB, QGIS
- Causal inference, temporal analysis, ecological inference, synthetic data generation and analysis
- Excellent oral/written communication
- Community-based participatory research

EXPERIENCE

Pre-Doctoral Research Fellow, Stanford RegLab: 09/2024-Present
Developing methodology for ecological inference
Collaborating with Santa Clara County Public Health Department on study design for mobile medication-assisted treatment intervention for opioid use disorder

Research Intern, Urban Institute: 10/2023-06/2024
Developed methodology to assess the utility of synthetic datasets by subgroup

Fellow, Stanford MUIR Program in Stanford HEEH Lab: 06/2023-09/2023
Developed methodology for the use of Scientific Machine Learning in infectious disease modeling

Peer Advisor, Stanford Mathematical and Computational Science (MCS) Program: 09/2022-06/2023
Advised prospective and current students on courses and careers in MCS

Intern, Physicians, Scientists, and Engineers for Healthy Energy: 06/2022-09/2022
Led research project to incorporate feedback from community-based environmental justice organizations into resilience hub location optimization models for California

Research Assistant, King Center on Global Development and Stanford Lobell Laboratory: 03/2021-06/2022
Analyzed connections between soil quality and health in India

Community-Based Researcher, VISIÓN Coalition and CRPE: 09/2021-06/2024
Developed automated data processing pipeline for Twitter bot and mailing list to notify advocates about newly permitted oil wells in connection to policy to limit oil wells near homes in California

Student Researcher, Stanford Burke Laboratory and Berkeley S/HE Laboratory: 12/2020-06/2024
Led community-based research project to quantitatively compare EJ screening tools in California
Assessed oil well exposure and analyzed census demographic data for temporal environmental justice study

Volunteer, Anti-Eviction Mapping Project: 11/2020-09/2023
Analyzed the effects of up-zoning for a report to the Berkeley Rent Board

PUBLICATIONS

- **Morton, C. M.**, Williams, A., Bowen, C. M. K. (2024). Evaluating Group-Wise Utility for Synthetic Datasets [In Progress]. *Journal of Privacy and Confidentiality*.
- **Morton, C. M.,** ..., Morello-Frosch, R., Casey, J. A., Walther, G., González, D. J. X. (2024). Classifying Cumulatively Disadvantaged Communities in California: A Quantitative Comparison of Environmental Justice Screening Tools [Submitted]. *Environmental Health Perspectives*.
- **Morton, C. M.,** Kelling, C. (2024). Towards Community-Based Participatory Statistics Research [Submitted]. *The American Statistician*.
- **Morton, C. M.,** Morello-Frosch, R., Casey, J. A., Walther, G., González, D. J. X. (2024). A Comparison of Tools to Classify Disadvantaged Communities in California [Undergraduate Thesis]. Stanford University.
- **Morton, C. M.** et al. (2023). Soil Micronutrients Linked to Human Health in India. *Scientific Reports*, 13(1), 13591, PMID: 37604890.
- **Morton, C. M.** (2023). JEDI Corner: Suggestions for Combining Secondary Data Analysis and Community-Based Research [Magazine Article]. *AmStat News Magazine.*
- González, D. J., **Morton, C. M.,** ..., Morello-Frosch, R. (2023). Temporal trends of racial and socioeconomic disparities in population exposures to upstream oil and gas development in California. *GeoHealth*, 7(3), PMID: 36968155.
- Esposito, E., ..., **Morton, C. M.,** ..., Hauf, S. (2022). Mitotic checkpoint gene expression is tuned by codon usage bias. *The EMBO Journal*, 41(15), PMID: 35811551.

PRESENTATIONS

- Kelling, C., **Morton, C. M.,** Seru, E. (2024). *Techniques for Facilitation and Development of Community-Engaged Quantitative Courses*. International Association for Research on Service-Learning and Community Engagement, San Diego, CA, United States.
- **Morton, C. M.,** Morello-Frosch, R., Casey, J. A., Walther, G., González, D. J. X. (2023). *Comparison of Tools to Classify Disadvantaged Communities in California* [Paper in proceedings]. Joint Statistical Meetings, Toronto, Canada.
- **Morton, C. M.,** Turner, M., Jones, J. (2023). *Inside The Black Box: Scientific Machine Learning for Infectious Disease Modeling*. Stanford Doerr School of Sustainability Undergraduate Research Symposium, Stanford, CA, United States.
- **Morton, C. M.,** Morello-Frosch, R., Casey, J. A., Walther, G., González, D. J. X. (2023). *Comparison of Tools to Classify Disadvantaged Communities in California* [Best Undergraduate Presentation Award]. Research Review, Stanford, CA, United States.
- **Morton, C. M.** (2022). *Empathetic Data Science Practice: Towards Community-Led Statistics for Stronger Science* [Paper in proceedings]. Joint Statistical Meetings 2022, Washington, DC, United States.
- **Morton, C. M.,** Kinkhabwala, Y., Smith, A., Murphy, P., Nez, Y., Gracia-Santiago, L., Robinson, S., Krieger, E. (2022). *Quantitative Community-Based Research for Climate Resilience: Developing Local Optimization Models to Site Resilience Hubs in California*. Symposium of Undergraduate Research and Public Service, Stanford, CA, United States.
- **Morton, C. M.,** Pullabhotla, H., Lobell, D. (2022). *Soil Micronutrients and Human Health: Evidence from India*. Symposium of Undergraduate Research and Public Service, Stanford, CA, United States.
- **Morton, C. M.,** Pullabhotla, H., Lobell, D. (2021). *Soil Micronutrients and Human Health: Evidence from India*. AGU Fall Meeting, New Orleans, Louisiana, United States.
- González, D. J. X., **Morton, C. M.,** Burke, M. (2021). *Assessing Populations in Proximity to Upstream Oil and Gas Activities in California: Persistent Racial and Socioeconomic Disparities*. IAPHS, Baltimore, Maryland, United States.

AWARDS/LEADERSHIP/PRESS

- Sterling award (top 25 undergraduates in Stanford School of Humanities and Sciences), 2024
- Finalist, Rhodes Scholarship, 2024
- Real World Data Science (Royal Statistical Society) Pride Month Profile, 2023
- Environment Sector Lead, Stanford Data and Mapping for Society Club, 2022-2023, 2023-2024
- EPA National Environmental Justice Video Challenge for Students, 2nd Place ($12,000), 2022
- Stanford Women in Math Mentoring Board, 2021-2022, 2022-2023, 2023-2024
- Stanford Computer Science + Social Good teaching team, 2021-2022
- Stanford High School Support Initiative tutor, 2020-2021