Tyler D. Hoffman

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Data science researcher applying quantitative methods for social good. In my Master's program, I honed my written and oral communication skills through academic publications and presentations. Now, I'm seeking positions where I can combine statistical analysis with science communication for decision-makers in sustainability, epidemiology, environmental science, and more.

Relevant Experience

Graduate Researcher *Aug 2021 – Dec 2023*
Kedron Lab, Arizona State University

- Designed statistical methods and libraries to enable causal inference with spatial data.
- Planned, managed, and executed solo and team research projects by conducting literature reviews, consulting domain experts, and delegating responsibilities.
- Published 6 peer-reviewed journal articles, 2 book chapters, 2 conference proceedings, and delivered scientific presentations to engage with the broader research community. These works have yielded a total of 28 citations to date.

Visiting Researcher *May 2023 – Aug 2023*
Regulation, Evaluation, and Governance Lab (RegLab), Stanford University

- Created novel statistical algorithms for challenging, policy-relevant inference problems.
- Collaborated with domain experts to inform choice of data sources, computational platforms, and modeling decisions.
- Applied novel spatial modeling techniques to real-world environmental and demographic data to infer levels of exposure to pollutants and draw conclusions about environmental justice.

Open Source Statistical Programmer *May 2020 – Oct 2022*
Python Spatial Analysis Library (PySAL)

- Developed open source software to enable the widespread use of spatial interaction modeling.
- Enhanced user experience by standardizing interfaces to library modeling classes.
- Facilitated recommended statistical practices by implementing a generic formula parser for spatial regression models.

Education

Arizona State University, Tempe, AZ *Aug 2021 – Dec 2023*
M.A., Geography; Certificate in Statistics and Data Science

University of Maryland, College Park, MD *Aug 2017 – May 2021*
B.S., Mathematics (High Honors); Minors in Computer Science and History

Skills, Languages, and Tools

Statistical computing	Python, R, SQL, Unix/Linux/Bash, Stan, LaTeX, Julia, MATLAB/Octave
Other computing	Github, C, Java, Fortran, OCaml, D, Lean, Netlogo, Rust, Go, APL, J
Languages	English (fluent), French (intermediate)
Journals published in	Annals of GIS, Annals of Epidemiology, Frontiers in Ecology and Evolution, Foundations of Data Science, Theoretical Ecology