DUNCAN J. MAYER

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SUMMARY

I am a PhD level scientist with 7 years of experience using real world data to predict and understand complex behavior and phenomenon. I maintain good coding practices and am comfortable building, evaluating, and interpreting everything from well known algorithms to bespoke models. I have extensive experience working with diverse data sources: structured and unstructured data, as well as relational databases and surveys. I have applied methods across topical areas health equity, neighborhood effects, and data quality. I have produced research and communicated results academic, government, and private sector stakeholders. You can find my full academic CV here.

PROGRAMMING: R (8 years) | SQL (4 years) | Stan (3 years) | Python (1 year)
STATISTICS: Hierarchical Models | Spatial Statistics | Longitudinal Data Analysis | Machine Learning | Experimentation

RECENT PROFESSIONAL EXPERIENCE

BeVera Solutions — Atlanta, GA
Health Statistician (full-time) — Sept. 2022 – Present

- **Data Science:** Built analytic data sets and led the methodological development of seven papers for the National Center for Infectious and Respiratory Disease focused on improving health sciences and evaluating the nation's COVID-19 response.
- **Leadership:** Managed multiple ongoing projects and developed project proposals, including substantive and methodological elements, for division directors.

Case Western Reserve University — Cleveland, OH
Research Fellow (full-time) — Aug. 2018 – June. 2022

- **Research:** Led and managed all aspects of multiple scientific studies, procuring over $80,000 in independent funding and communicating results in over 5 technical talks at scientific conferences and 9 publications in top journals across disciplines.
- **Data Science:** Developed multiple novel quantitative results and methodologies, examples include a Bayesian methodology for areal data, penalized splines for geostatistics, and space-time interaction with Guassian Markov random fields.
- **Consultation:** Provided methodological support and consultation for select research projects, including survey research, randomized trials, and observational studies, at the The Center on Poverty and Community Development.

The Institute at Wilkes University — Wilkes-Barre, PA
Research Analyst (full-time) — July 2017 – June 2018

- **Research:** Co-authored 11 funded research papers and multiple presentations, delivered to a variety of stakeholders across sectors on a range of policy issues including health equity, health literacy, civic participation, and human services.
- **Data Science:** Led data analysis in 5 studies involving administrative and/or public data, including web scraping, cleaning, visualization, and reporting.

EDUCATION

Case Western Reserve University — Cleveland, OH
PhD in Social Welfare — (Defended June) 2023

Marywood University — Scranton, PA
Masters of Social Work — 2017
Bachelors of Social Work — 2015

EXAMPLE PAPERS

Mayer, D. J. (under review). Delinquency, Lead, and Nonprofit Density; A Spatio-Temporal Perspective. *Social Science and Medicine.* PDF

Mayer, D. J. (2023). Understanding Location and Density; A Spatial Analysis of Cuyahoga County Ohio's Nonprofit Sector. *Nonprofit and Voluntary Sector Quarterly.* DOI: 10.1177/08897640231171074 PDF

Mayer, D. J. (2022). Fischer, R. L. (2022). Can a Measurement Error Perspective Improve Estimation in Neighborhood Effects Research? A Hierarchical Bayesian Methodology. *Social Science Quarterly.* DOI: 10.1111/ssqu.13190 PDF