DUNCAN J. MAYER

DATA SCIENTIST

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SUMMARY

I am a data scientist with nearly a decade of experience using 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. In addition to my methodological work, I bring domain expertise in organizational theory and have published articles on nonprofit finance, data use, and neighborhood effects.

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

EDUCATION

Case Western Reserve University — Cleveland, OH
PhD in Social Welfare — (Expected Spring) 2023

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

RECENT PROFESSIONAL EXPERIENCE

BeVera Solutions — Atlanta, GA
Statistician — Sept. 2022-Present

- Led all statistical aspects of 3 white papers for the National Center for Immunization and Respiratory Diseases evaluating the nation's COVID response (R, SQL)
- Automated data quality reports, reducing missing data by 10 percent (SQL, R)

Case Western Reserve University — Cleveland, OH
Data Scientist — Aug. 2018-Aug. 2022

- Led all aspects of N scientific studies, publishing multiple first author papers including novel methodologies and state of the art applications (R, SQL, Stan)
- Communicated methods and insights in over 5 technical talks at scientific conferences and over 150 hours of course lectures
- Co-authored 3 funded research papers paring survey and administrative data
- Developed programming courses for the data science for social good certificate

The Institute for Public Policy and Economic Development — Wilkes-Barre, PA
Research Analyst — July 2017-June 2018

- Co-authored 11 funded research papers on topics relevant to state government, leading data analysis in 5 (R)
- Provided adhoc data analysis to a variety government and corporate stakeholders

SELECT PAPERS

Simmer Down Now! A Study of Revenue Volatility and Dissolution in Nonprofit Organizations

- Quantified the effect of revenue volatility on dissolution in nonprofit organizations using archival tax records organizations (N = 2,126,894) and discrete time survival models (R, SQL)

Can a Measurement Error Perspective Improve Estimation in Neighborhood Effects Research? A Hierarchical Bayesian Methodology

- Developed a probabilistic model to incorporate sampling error into neighborhoods effects research using a full Bayesian Methodology (Stan, R)

Understanding Location and Density: A Spatial Analysis of Cuyahoga County's Nonprofit Sector

- Quantified the effects of location of nonprofit revenue using penalized spines (generalized additive models) showing the "best" locations tend to central in agglomeration clusters (R)