

Timothy A. Model

Computational Social Science Researcher

Resumé
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Experience

Chief Data Scientist May 2020 – Present
CoronaNet Research Project

- Leading a team of 25 international data scientists and engineers in data pipeline development and maintenance
- Implementing quality control protocols, validation tools, and performance metrics using Shiny and R
- Improving efficiency of complex data processing models in R
- Generating data visualizations for public engagement

Havighurst Fellow August 2019 – May 2020
Miami University, Oxford, OH

- Conducted 3 independent research projects on protest politics, political corruption, and survey measurement strategies that resulted in public-facing publications and conference papers
- Produced and analyzed longitudinal, textual, network, and biographical datasets with up to 1 million observations
- Designed and implemented an international survey instrument
- Managed \$700,000 worth of grant applications to study variation in political responses to COVID-19 pandemic
- Presented research at 2 international conferences and 3 invited talks
- Published an op-ed and featured on interview with major news organizations
- Taught 4 courses on research methods, political economy of development, and political corruption
- Reviewed Freedom House's Russia report

Doctoral Researcher & Associate Instructor August 2013 – July 2019
Department of Political Science, Indiana University, Bloomington, IN

- Supervised 3 research teams in collecting, analyzing, and visualizing survey, focus group, and observational data
- Completed 6 research projects on election fraud, political corruption, anti-corruption strategies, and protest politics
- Collaborated on international and multidisciplinary teams to implement 2 international surveys and focus groups
- Analyzed data across 4 languages using quantitative and qualitative methods
- Developed 7 cross-national datasets with biographical, longitudinal, panel, network, and textual data containing up to 1 million observations
- Presented quantitative research at 9 international and multidisciplinary conferences
- Earned \$50,000 in grants to support independent research
- Trained students in 9 courses on research methods, political corruption, Russian politics, and political theory
- Consulted on statistical analysis for 2 peer-reviewed publications in biochemistry and political science
- Prepared statistical algorithms for interpreting univariate distribution and modality test results

Technical Skills

- Programs and Programming Languages: R, JAGS, Stata, Python, SQL, LaTeX, R Markdown, AWS, SQL
- Data Visualization: ggplot2, Plotly, Shiny, Tableau, Microsoft Power BI
- Methods: Generalized Linear Modeling, Natural Language Processing, Hierarchical Modeling, Time Series Analysis, Spatial Analysis, Network Analysis, Bayesian Approaches, Data Reduction and Classification Techniques (e.g., Factor Analysis, PCA, LCA), Causal Inference
- Languages: English (native), Russian (advanced), Spanish (beginner)

Awards

- John V. Gillespie Memorial Scholarship for excellence in mathematical modeling and quantitative methodology
- Department of Political Science Graduate Leadership Award
- Outstanding Associate Instructor Award for Best Graduate Student Instructor

Education

Ph.D., Political Science, Indiana University. 2019
B.A., Diplomacy/Global Politics & Russian, East European, and Eurasian Studies, Miami University. 2012