Merlin Heidemanns, PhD

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SUMMARY:

Quantitative social science researcher with advanced methodological skillset, specialized in Bayesian Statistics and forecasting, and eager to tackle complex problems with tailored and novel and data-backed solutions

EDUCATION:

Columbia University, New York, NY (2017-2022)
Ph.D., in Political Science, concentration in Quantitative Methodology, Political Forecasting, and Survey Methods

Freie Universität, Berlin, Berlin, Germany (2014-2017)
B.A. in Political Science, Magna cum Laude

EXPERIENCE:

University Researcher, Columbia University (2017 – 2022)

- Developed and executed a diverse set of research designs using spatial, time-series, and survey data and methods
    - Bayesian forecasting models for the US and French Presidential elections to aggregate predictions from several models based on different data sources
    - Research into patterns of polling for which I collected and analyzed polling data from the US, Canada, the UK, and Germany since 1994
- Developed original methodological approaches including
    - A multi-stage ecological inference model to estimate race-level absentee ballot rejection rates from aggregate data at the county level
    - A poll aggregation model for cases in which surveys cover only subsets of potential candidates such as during primaries
- Supervised three research assistants during data collection, assessing data quality and covering several thousand pages of archival reports
- Published articles in peer-reviewed scientific journals and newspapers
- Organized a department workshop soliciting submissions and coordinating with the administration
- Volunteered as graduate student council president overseeing the budget and organizing social activities

Instructor, Columbia University (2017 – 2022)

- Taught undergraduate R coding sections for introductory statistics undergraduate course
- Led undergraduate and PhD level discussion sections in Applied Statistics over four semesters
    - Coursework covered regression analysis, causal inference methods (experiments, DiD, RDs, IVs), hierarchical models, and survey adjustment approaches (MRP) in a Bayesian framework

Data Consulting, The Economist, 2020

- Co-developed a forecasting model for the 2020 US Presidential election aggregating predictions based on polls, unemployment, and presidential approval
    - The model was the core component of The Economist's reporting on the election.

- Contributed original research on the effect of absentee ballot rejections on election outcomes using MRP and voter records. The published articles showed variation in rejection rates by race and how changes in absentee ballot voting rates would differentially impact the election results across states.

Data Consulting, USAToday, 2020

- Integrated and standardized absentee ballot data across all 50 states
- Modeled the expected number of rejected absentee ballots for the 2020 election and discussed how best to communicate model limitations to the lay audience

Internship, United Nations OIOS, 2018

- Used supervised text classification to extract and analyze event data from five years of daily reporting
    - The research contributed to the team's evaluation of the UN mission in South Sudan.
- Communicated methodological benefits and limitations to stakeholders including the potential for event misclassifications

PUBLICATIONS AND MEDIA:

- **Heidemanns, M.,** Gelman, A., & Morris, G. E. (2020). An Updated Dynamic Bayesian Forecasting Model for the US Presidential Election. *Harvard Data Science Review*, *2*(4).
- Morris, G.E. & **Heidemanns, M.** (2020) In America, your absentee ballot is more likely to be counted if you're white. *The Economist*
- Morris, G.E. & **Heidemanns, M.** (2020) Mailing it in. *The Economist*
- Beall, P., Felke, C., Hajdenberg, J, Mulvey, E. Shukla, A., & **Heidemanns, M.** (2020) More than 1 million people could lose their vote on Nov. 3. *USATODAY*

SKILLS:

Analytical

Bayesian Statistics | Forecasting | Survey Methods | Causal Inference | Machine Learning | Scientific Writing

Coding

R (advanced) | Stan (advanced) | Python (intermediate) | QGIS (intermediate) | GitHub (intermediate) | Excel (intermediate) | SQL (elementary)

Languages

German (native) | English (native) | French (intermediate) | Italian (beginner)

Last Updated: March, 14th 2022