Colin Rafferty Case

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PROFESSIONAL PROFILE

Computational social scientist with four years of experience in research and project management. Trained in statistics, machine learning, survey design, and causal inference.

EDUCATION

University of North Carolina   Chapel Hill, North Carolina
- Ph.D. in Political Science   Expected May 2024
- Master of Arts, Political Science   August 2021

University of Michigan   Ann Arbor, Michigan
- Bachelor of Arts, Economics and Political Science *Highest Honors*   May 2019

PROFESSIONAL EXPERIENCE

Graduate Student Researcher University of North Carolina   August 2019-Present
- Designed, implemented, and managed multi-year dissertation project, employing advanced machine learning and survey experiments, time and project management.
- Oversaw 10 undergraduate researchers in collecting campaign website text for all US House primary candidates (N=2,000), organized codebooks, lead trainings, and developed validation procedures.
- Coordinated 6-wave panel survey during 2020 presidential election containing both observational and experimental designs.

Graduate Student Instructor University of North Carolina   August 2022-Present
- Lab instructor for Advanced Topics in Political Data Science (PhD level); develop and walk students through labs in R covering topics in causal inference, regularized regression, measurement models, and text as data.

Pension Coder University of Michigan   October 2017-August 2019
- Obtained and analyzed legal documents that describe the pension provisions provided to employees of private firms, federal, state and local governments.
- Developed formulas and eligibility constraints for over 200 defined benefit pension plans and coded in Pension Analyst to calculate pension wealth for respondents.

Analytics and Data Science Intern Excellus BCBS   May 2017-August 2017
- Created full specification document with technical notes, organized data queries, and testing documentation for data validation of the new Pharmacy Management Report.
- Coordinated between report developers and business consultants to develop a new Multiple Time Period at a Glance Report along with setting up testing scenarios for validating data in the report to be used for data reporting.

Research Assistant University of Michigan   April 2016-October 2017
- Interviewed local Mexican churches and government offices to verify official patron saint and date of holiday; located churches using google maps and geocoded coordinates to confirm town's patron saint and to correlate night time luminosity with timing of patron saint ceremony.

DATA SCIENCE & TECH STACK

Languages
- R (expert), Python (proficient), SQL (proficient), JavaScript (novice)

Programs
- Git, Qualtrics (survey & experimental design), Latex

Machine Learning
- Unsupervised learning, tree-based models, neural networks, text as data

Statistical Modeling
- Generalized linear models, multilevel models, measurement models