

Peter Bachman

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Education

Washington University in St. Louis 2024
M.A. Political Science; Emphasis on Statistics and American Politics

Utah State University 2021
B.A. Political Science; Minors in Japanese and Statistics

Professional Experience

Washington University in St. Louis May 2022 - May 2024
Data Science Researcher

- Analyzed, prepared, and summarized survey data and statistical findings.
- Developed visualizations in **Python** and **R** to communicate statistical findings and enhance data interpretation.
- Led a team of graduate students to develop an **R** package for multidimensional scaling across multiple datasets.
- Utilized OCR and OpenAI's LLMs to extract and validate information from PDFs, improving existing processes.
- Managed and improved data processing workflows using **Git**.
- Combined various data sources into cohesive datasets for statistical analysis.
- Maintained databases of Twitter posts and comments using **SQL**.

Washington University in St. Louis August 2022 - May 2024
Assistant Instructor

- Assisted in teaching graduate and undergraduate political science courses in classes ranging from 10 to 100 students.
- Developed weekly assignments, problem sets, and exams to enhance student learning outcomes.
- Conducted a summer course focusing on applied statistical programming using **R**.

Research Experience

Washington University in St. Louis August 2021 - May 2024

- Developed and trained machine learning models for text classification in legal texts to understand Supreme Court behavior.
- Led a team of seven undergraduate students in hand-coding Supreme Court opinions for LLM fine-tuning.
- Led and collaborated on multiple research projects focused on American political behavior.
- Presented research findings on multiple projects to local and national audiences.
- **Relevant Coursework:** Game Theory, Econometrics, Statistical Modeling, Machine Learning, Bayesian Modeling, Natural Language Processing, Causal Inference

Utah State University May 2019 - May 2021

- Assembled a large-scale database using a combination of API requests, **SQL** queries, and web scraping.
- Presented research projects and statistical findings to a diverse audience.

Skills

Languages: **Python**, **R**, **SQL**, **HTML**

Programs: **Git**, **Tableau**

Statistical Analysis: **Regression Analysis**, **Bayesian Modeling**, **Topic Modeling**, **Word Embeddings**, **LLMs**, **Sentiment Analysis**, **Text Classification**, **Causal Inference**