ADAM RAUH

adamrauh@umich.edu

EDUCATION

University of Michigan August 2020 -
PhD Student, Political Science

University of Michigan April 2018
B.S. in Data Science with Distinction and High Honors

WORK EXPERIENCE

Political Methodology Lab, MIT July 2018 - July 2020
Computational and Statistical Research Specialist
· Contributed to research, working with Professors Danny Hidalgo, In Song Kim, and Teppei Yamamoto
· Used R, Rcpp, SQL, and Python for a variety of research projects
· Managed the department's high performance computing system
· Taught departmental workshops about computational and statistical tools

Department of Statistics, University of Michigan September 2017 - April 2018
Proctor & Grader
· Worked as a grader and proctor for introductory undergraduate statistics course, STATS 250

Expeditors International May 2017 - August 2017
Analytics Intern
· Used machine learning and other statistical techniques to predict shipment performance and optimize various aspects of freight movement
· Worked to determine important attributes and events in the process of moving freight to provide insight on efficiency and cost

Information & Technology Services, University of Michigan May 2016 - May 2017
Software Development Intern
· Used Python for back end web development
· Worked with a variety of Amazon Web Services features and use cases

Academic Success Program, University of Michigan November 2015 - April 2016
Tutor
· Tutored student athletes in mathematics, statistics, and programming topics

R PACKAGES & PROJECTS

PanelMatch
· Helped develop the current version of *PanelMatch*, an R package for applying matching methods to time-series cross-sectional data

optmatch
· Helped develop a set of computational efficiency improvements
· Implemented a set of user interface changes by modifying and streamlining important data structures within the package

LobbyView
· Helped with a variety of development and data cleaning, processing, and analysis tasks

CONFERENCE PAPERS AND POSTERS

Adam Rauh and Ben Hansen. *Improving Computational Efficiency of Treatment and Control Match Generation in optmatch.* 2018 (Prepared for the Society for Research on Educational Effectiveness conference)

Allie Cell, Joshua Bochu, Bhavika Jalli, Adam Rauh, Colin Tan, Xinyu Tan, Jared Webb, Arya Farahi, Danai Koutra, Jonathan Stroud, and Colin Tan. *Understanding Blight Ticket Compliance in Detroit.* 2017 (Prepared for the University of Chicago Data Science for Social Good conference)

Jacob Abernathy, Cyrus Anderson, Chengyu Dai, Arya Farahi, Linh Nguyen, Adam Rauh, Eric M. Schwartz, Wenbo Shen, Guangsha Shi, Jonathan Stroud, Xinyu Tan, Jared Webb, and Sheng Yang. *Flint Water Crisis: Data-Driven Risk Assessment Via Residential Water Testing.* 2016 (Prepared for the Bloomberg Conference Data for Good Exchange)

WORKSHOPS

Using the Political Methodology Lab High Performance Computing System
MIT (November 2018, October 2019)
Taught workshop focused on using remote servers and large computational resources for members of the MIT Political Science department

Rcpp and Optimizing R
MIT (March 2019)
Taught workshop for members of the MIT Political Science department focused on basic topics in data structures and algorithms, utilizing the Rcpp framework, and writing efficient R code

Introduction to Pandas
University of Michigan (October 2017)
Taught workshop about basic Pandas usage at hackathon organized by the *Michigan Sports Analytics Society* and the *Michigan Data Science Team*, both student groups on campus

SCHOLARSHIPS AND HONORS

Outstanding Undergraduate Data Science Major, Class of 2018

Adel-Backus Scholarship, University of Michigan, College of Literature, Science, and the Arts

Stewart R. Wallace Scholarship, University of Michigan, College of Literature, Science, and the Arts

PROGRAMMING LANGUAGES AND TECHNICAL SKILLS

Programming Languages: R, Python, C++, SQL
Other Technologies: Rcpp, LaTeX, Pandas, Numpy, Hadoop, Flask, Excel, Amazon Web Services