SAM ZHANG

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SUMMARY

PhD student in applied mathematics (NSF Graduate Research Fellow) with background in computer science and four years of professional software engineering experience. Interested in problems with social impact at the intersection of computational social science, data science, and applied math.

EDUCATION

University of Colorado, Boulder, Boulder, CO   *August 2019 — Present*
Ph.D. Applied Mathematics
Advisor: Aaron Clauset

Swarthmore College, Swarthmore, PA   *Fall 2010 - 2014*
B.A. Computer Science and Psychology

Thomas Jefferson High School for Science and Technology, Alexandria, VA   *Fall 2006 - 2010*

EMPLOYMENT

University of Colorado, Boulder, Boulder, CO   *April 2019 — Present*
Graduate Research Assistant, Prof. Aaron Clauset
Using techniques from computational social science and network science to study inequalities in academia.

OpenCounter, San Francisco, CA   *January 2017 — January 2018*
Software Engineer
Fifth engineer; designed/implemented search engine that is the entrypoint to the website. See blog post.

Pivotal Labs, Arlington, VA   *July 2015 — September 2016*
Software Engineer
DC office founding team. Engineering lead on several major projects, such as a data science platform for a Fortune 500 company.

Giant Oak, Arlington, VA   *September 2014 — July 2015*
Software Engineer
Giant Oak's engineering representative on the DARPA Memex project.

PROJECTS

Solve for Good Summer, 2020
Lead project scoper for the Solve for Good kickoff summer. Trained other volunteers how to scope data science projects while scoping them myself, such as a major project with UNICEF.

Data for Democracy, Boulder/Denver chapter, 2017-2019
Co-founded and organized the Boulder/Denver Data for Democracy meetup. Organized speakers, hackathons, and cultivated local data science projects with volunteers. We collaborated with Boulder city staff on analyzing racial bias in policing, and with the Denver University Law School on analyses of policing data, among other projects.

Documenting Hate, ProPublica, 2017
Paid data science contractor on the Documenting Hate project.

Southern Poverty Law Center, 2017
Coauthored data-driven series exploring a white supremacist forum on Hatewatch blog. Invited to headquarters to consult on future data science projects.

University of Chicago Data Science for Social Good Fellowship, 2014
Nation-scale predictive modeling on uninsuredness and contactability for the non-profit Enroll America.

AWARDS

National Science Foundation Graduate Research Fellow, 2020
University of Chicago Data Science for Social Good Fellow, 2014

PUBLICATIONS

1. Daniel B Larremore, Bailey K Fosdick, Kate M Bubar, Sam Zhang, Stephen M Kissler, C Jessica E Metcalf, Caroline Buckee, and Yonatan Grad. Estimating sars-cov-2 seroprevalence and epidemiological parameters with uncertainty from serological surveys. *medRxiv*, 2020

2. Daniel B Larremore, Bailey K Fosdick, Sam Zhang, and Yonatan H Grad. Jointly modeling prevalence, sensitivity and specificity for optimal sample allocation. *bioRxiv*, 2020

PRESENTATIONS & POSTERS

International Conference of Computational Social Science (IC2S2), July 2020: "The role of students in explaining how prestige drives scientific productivity"
Topology Seminar, University of Colorado, Boulder, March 2020: "Discrete Morse theory and practice"

Contributed
Joint Mathematics Meeting, Student Poster Session, January 2020: "Topological data analysis of cosmochemical data"
International Conference on Network Science (NetSci), June 2019: "Quantifying gender disparity in faculty flows across a hiring and promotion network"

TEACHING ASSISTANTSHIPS

University of Colorado, Boulder

Calculus 3 for Engineers	*Fall 2019*
Linear Algebra for Non-Math Majors	*Spring 2019*
Number Systems: An introduction to higher mathematics	*Fall 2018*

MEDIA

(KGNU) On Data for Democracy and racial bias in police stops: tinyurl.com/kgnu-d4d	*2017*
(NPR Marketplace) On the DSSG fellowship: tinyurl.com/sam-marketplace	*2014*