

Yicheng Shen

Updated May 15, 2024

Email: yicheng.shen@duke.edu

Phone: +1 (507) 581-2518

GitHub: <https://github.com/sheny2>

LinkedIn: www.linkedin.com/in/yicheng-shen

Personal Website: <https://sites.google.com/view/yichengshen>

Research Interests

Bayesian hierarchical modeling and diagnostics, causal inference, comparative effectiveness research, latent variable modeling, network analysis, interdisciplinary research with applied statistics in health and social sciences.

Education

Johns Hopkins University

Baltimore, MD

Ph.D. in Biostatistics

August 2024 – May 2029

Duke University

Durham, NC

M.S. in Statistical Science

August 2022 – May 2024

Mentors: Dr. Hwanhee Hong & Dr. Alexander Volfovsky

Carleton College

Northfield, MN

B.A. in Statistics & Political Science

August 2018 – June 2022

Mentors: Dr. Andrew Poppick & Dr. Greg Marfleet

Graduate with Distinctions & *Magna Cum Laude*

Selected Coursework

Statistics: Bayesian statistics, sampling techniques, time series analysis, predictive modeling, statistical inference, hierarchical modeling, statistical computing, causal inference, probabilistic machine learning, study design, spatio-temporal modeling, high-dimensional statistics.

Mathematics: multivariate calculus, linear algebra, probability, mathematical structure, ordinary differential equations, numerical analysis, computational mathematics, real analysis.

Political Science: methods of political research, American politics, foreign policy analysis, American foreign policy, computational political science.

Working Papers & Publications

Shen, Y., Hu, M., Hong, H. (2024). Assess Between-study Heterogeneity in Meta-analyses from Cochrane Library Database. [Manuscript in preparation]

Shen, Y., Hong, H., Chu, H. (2023). Empirical Insights about Power Behaviors in Bayesian Network Meta-Analysis: Simulation Studies and Real-Data Applications. [In preparation for submission: manuscript drafted and abstract accepted by the contributed session at *ENAR 2024*]

Shen, Y., Bail, C. A, Volfovsky, A. (2023). Exploring New Ideal Point Estimation Strategies with Twitter Social Networks and Text Data. [In preparation for submission: manuscript drafted and presented at *TADA 2023*]

Shen, Y. (2022). Justified Cause? Assessing the Humanitarian Outcomes of US Foreign Aid and Intervention Since the Cold War. *PoliS: Carleton Journal of Political Science*, inaugural edition, pp.129-167.

Shen, Y., Flignor, J., Nachreiner, L., & Wang, K. (2022). Behind the Smoke: An Extreme Value Analysis of Air Pollution in Minnesota. *Consortium for the Advancement of Undergraduate Statistics Education*, spring 2022 issue.

Honors, Recognition & Funding

Honorable Mention for the BEST Award for Master's Research	2024
Teaching Assistant of the Year Award	2024
Dean's Research Award for Master's Students (twice)	2022 & 2023
TADA Travel Award	2023
Duke Career Center Professional Development Fund	2022
First Prize in Undergraduate Statistics Research Project Competition	2022
Phi Beta Kappa Society	2022
Sigma Xi Society	2022
Distinction on Statistics Senior Thesis	2022
Distinction on Political Science Senior Thesis	2022
Dean's Honor List - Top 10% of Class	2021
Towsley Endowment for the Sciences Fellowship	2021
Carleton Nonprofit Externship Grant	2020
ASDAN Mathematics Tournament - National Top 10 Teams	2018
American Regions Mathematics League - Global Top 100 Teams	2017

Teaching Experience

Teaching Assistant (Duke University)	Aug 2023 – May 2024
STA 610: Multilevel and Hierarchical Models	
STA 432: Theory and Methods of Statistical Learning and Inference	
Teaching Assistant (Carleton College)	Sep 2020 – May 2022
STA 320: Time Series Analysis	
STA 230: Applied Regression Analysis	
STA 220: Introduction to Data Science	

Work Experience

Quantitative Resource Center	Northfield, MN
Comprehensive Integrative Exercise Consultant	Sep 2021 – June 2022
Department of Mathematics and Statistics	Northfield, MN
Student Departmental Advisor	Sep 2021 – June 2022
Undergraduate Journal of Humanistic Studies	Northfield, MN
Editor of 2020 & 2021 Issues	Mar 2021 – June 2022
Minnesota Council of Nonprofits	Saint Paul, MN
Legislator Data Analytic Internship	Nov 2020 – Dec 2020
Northfield Area Family YMCA	Northfield, MN
Statistical Consultant	Jan 2021 – Mar 2021

Laurence McKinley Gould Library

Special Collection and Preservation Assistant

Northfield, MN

Oct 2018 – Apr 2022

**Invited Conferences
& Presentations**

Duke Industry Statistics Symposium (DISS)	Apr 2024
Eastern North American Region (ENAR) Spring Meeting	Mar 2024
Duke Research Data Visualization Competition and Showcase	Feb 2024
Duke Health Data Science Poster Showcase	Dec 2023
New Directions in Analyzing Text as Data (TADA) Conference	Nov 2023
Electronic Undergraduate Statistics Research Conference (eUSR)	Nov 2022
Carleton College Political Science Departmental Distinction Talk	Jan 2022
Northfield Undergraduate Mathematics Symposium (NUMS)	Nov 2021
Carleton Undergraduate Research and Internship Symposium	Sep 2021

**Professional Society
Membership**

Eastern North American Region of International Biometric Society	since 2023
International Society for Bayesian Analysis	since 2023
American Statistical Association	since 2019

Skills**Programming**Proficiency in: R, [Shiny](#), [Python](#), MySQL, MATLAB, Mathematica, [NetLogo](#).**Languages**

Full professional level English & Chinese, elementary level Japanese & Spanish.

Software & Statistical Implementation

Rich experience in GitHub, Quarto, \LaTeX & Overleaf, Jupyter Notebook, GWAS with PLINK, coding and operating on server clusters, predictive modeling, hierarchical modeling, agent-based modeling, clustering and classification problems, JAGS, MCMC-related Bayesian sampling and diagnostics.

Personal Interests

Karate, badminton, movies, hiking, volunteer work, book preservation.