

Abby Stevens

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Education

The University of Chicago, Chicago, IL 2017 - 2022

PhD in Statistics

Advisor: Rebecca Willett

- *Rising Star in Data Science*, CDAC, 2021
- *David Wallace Award for Applied Statistics*, 2020

Grinnell College, Grinnell, IA 2010 - 2014

B.A. in Mathematics (with Honors)

- *Pamela Ferguson Endowed Prize in Mathematics*, 2013
- *Dean's List*, 2010 - 2014

Budapest Semesters in Mathematics, Budapest, Hungary Spring 2013

Semester abroad

Professional Experience

Argonne National Lab April 2020 - Present
Research Assistant in the Social and Behavioral Systems Group Chicago, IL

Doxmity 2014 - 2017
Data Scientist San Francisco, CA

Publications

Gao*, Y., **Stevens***, A., Raskutti, G., and Willett, R. (2022). Lazy estimation of variable importance for large neural networks. In *Proceedings of the 39th International Conference on Machine Learning*, volume 162 of *Proceedings of Machine Learning Research*, pages 7122–7143. PMLR

Hotton, A. L., Ozik, J., Kaligotla, C., Collier, N., **Stevens, A.**, Khanna, A. S., MacDonell, M. M., Wang, C., LePoire, D. J., Chang, Y.-S., Martinez-Moyano, I. J., Mucenic, B., Pollack, H. A., Schneider, J. A., and Macal, C. (2022). Impact of changes in protective behaviors and out-of-household activities by age on covid-19 transmission and hospitalization in chicago, illinois. *Annals of Epidemiology*

Mucenic, B., Kaligotla, C., **Stevens, A.**, Ozik, J., Collier, N., and Macal, C. (2021). Load balancing schemes for large synthetic population-based complex simulators. In *2021 IEEE International Parallel and Distributed Processing Symposium Workshops (IPDPSW)*, pages 985–988

Stevens, A., Willett, R., Mamalakis, A., Foufoula-Georgiou, E., Randerson, J., Smyth, P., Wright, S., and Tejedor, A. (2020). Learning patterns of predictability for southwestern us precipitation using graph-guided regularized regression of pacific ocean climate variables. *Journal of Climate*, 34(2):737–754

Kaligotla, C., **Stevens, A.**, Ozik, J., Collier, N., Macal, C., Martinez-Moyano, I. J., Mucenic, B., Hotton, A., and Choe, K. W. (2020). Development of a large-scale synthetic population to simulate covid-19 transmission and response. *Proceedings of the 2020 Winter Simulation Conference*

Saleiro, P., Kuester, B., Hinkson, L., London, J., **Stevens, A.**, Anisfeld, A., Rodolfa, K. T., and Ghani, R. (2018). Aequitas: A Bias and Fairness Audit Toolkit. *eprint arXiv:1811.05577*.

Talks & Posters

“Lazy Estimation of Variable Importance for Large Neural Networks,” *39th International Conference on Machine Learning*, July 2022.

“Modeling the Impact of Social Determinants of Health on COVID-19 Transmission and Mortality to Understand Health Inequities,” *Rising Stars in Data Science, Center for Data and Computing, University of Chicago*, January 2021.

“Graph-guided regularized regression to improve predictive skill of precipitation at seasonal timescales,” *American Geophysical Union, AGU Fall Meeting*, December 2020.

“Modeling the Impact of Social Determinants of Health on COVID-19 Transmission and Mortality to Understand Health Inequities,” *Consortium for Data Scientists in Training, Michigan Institute for Data Science, University of Michigan*, October 2020.

“Graph-guided regularization for improved forecasting of Southwestern US winter precipitation,” *American Geophysical Union, AGU Fall Meeting, San Francisco, CA*, December 2019. (*poster*)

“Graph-guided regularization for improved seasonal forecasting,” *Workshop on Climate Informatics, Paris, France*, September 2019. (*poster*)

“Leveraging large ensemble climate simulations and graph-guided regularization for improving seasonal hydroclimatic forecasting,” *Large Ensembles Workshop, Boulder, CO*, July 2019. (*poster*)

“Leveraging large ensemble climate simulations and graph-guided regularization for improving seasonal hydroclimatic forecasting,” *Midwest Machine Learning Symposium, Madison, WI*, June 2019. (*poster*)

“Graph Total Variation for Seasonal Forecasting,” *Computational and Applied Mathematics Student Seminar, Chicago, IL*, April 2019.

Teaching

STAT 10118 94 - Pathways in Data Science, <i>Instructor</i>	Summer 2021
STAT/CMSC 118 - Introduction to Data Science I, <i>TA</i>	Fall 2018-2021
STAT/CMSC 119 - Introduction to Data Science II, <i>TA</i>	Winter 2019-2022
STAT 234 - Statistical Models and Methods, <i>TA, head TA</i>	Winter, Spring 2018

Service

University of Chicago

- Equity, Diversity and Inclusion Student Committee 2019 - 2021
- Statistics Consulting Program 2017 - 2022
- Panelist, Discover UChicago 2019
- Panelist, FermiLab & Argonne intern summer visit 2019
- Invited speaker, Physical Sciences Division fall orientation 2019
- Department of Statistics, Student Representative 2018 - 2019
- Dean’s Student Advisory Committee, Physical Sciences Division 2018 - 2019
- Center for Data Science and Public Policy, volunteer 2018

Professional

- Ambassador and organizer, Women in Data Science Chicago 2019 - Present
- Code for San Francisco, Data Science Working Group 2016-2017
- Invited speaker, Women in Mathematics Colloquium, Mills College 2015