

# Abby Stevens

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## Education

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**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

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

**Ambition Data** 2017 - 2020  
*Data Science Consultant*

**Doxmity** 2014 - 2017  
*Data Scientist* San Francisco, CA

## Publications

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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*, pages 7122–7143

Kaligotla, C., **Stevens, A.**, Ozik, J., Collier, N., Macal, C., Martinez-Moyano, I. J., Stevens, A., 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*

**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

**Stevens, A.**, Willett, R., Mamalakis, A., Foufoula-Georgiou, E., Randerson, J., Smyth, P., Wright, S., and Tejedor, A. Graph-guided regularization for improved seasonal forecasting. In Brajard, J., Charantonis, A., Chen, C., and Runge, J. (Eds.). (2019). *Proceedings of the 9th International Workshop on Climate Informatics: CI 2019* (No. NCAR/TN- 561+PROC). doi:10.5065/y82j-f154.

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

## Talks & Posters

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“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

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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

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### 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