

Elizabeth Sander

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- Education**
- Ph.D., Ecology and Evolution**, University of Chicago, Chicago, IL, May 2017
Awarded NSF Graduate Research Fellowship, 4.0 GPA
- B.A. in Mathematics** with Honors, University of Vermont, Burlington, VT, May 2012
Concentration in Statistics
Summa cum laude, Honors College Scholar, 4.0 GPA
- Experience**
- Senior Data Scientist**, Civis Analytics, Chicago, IL October 2018 – Present
- Data Scientist** July 2017 – October 2018
- Data Science Research & Development Intern** Summer 2016
- Write and maintain R and Python libraries to automate data science workflows
 - Research and develop methodologies to solve client problems such as segmentation, customer acquisition, persuasion, and optimization of advertising budget
 - Work in cross-functional teams with software engineers to build data-driven web services
 - Product scoping and user research for modeling products
 - Predictive modeling subject matter expert in client conversations
- Volunteer Data Expert**, DataKind, Chicago, IL November 2018 – March 2019
- Worked in small team to provide *pro bono* data science services to green energy advocacy organization
 - Converted legacy STATA ETL code to user-friendly Python notebook
 - Advised on experimental design and statistical methodology to measure value of advocacy work
- Graduate Student**, University of Chicago, Chicago, IL 2012 – 2017
- Implement and tune optimization algorithms (genetic algorithms, Metropolis-coupled MCMC) in C
 - Clean imperfect network and time series data in R, Linux shell
 - Simulate large dynamical systems in R and Mathematica
 - Use Dynamic Bayesian Networks and likelihood models to study ecological networks
 - Teaching assistant for scientific computing course
- Software Engineering Intern**, LORD Microstrain, Burlington, VT Summer 2012
- Wrote R package to facilitate online analysis of large amounts of cloud data using HTTP, RCurl and S4
- Skills**
- Languages:** Python (PyData stack, SQLAlchemy, Flask), R (ggplot, tidyverse, igraph), SQL (Redshift, Postgres, sqlite), C, bash, MATLAB/Octave, Go
- Tools:** Git, Docker, AWS, SVN, Emacs, \LaTeX