

Katie Scranton

Philadelphia, PA // email // phone

I am a PhD data scientist who loves solving complex statistical challenges to better analyze and visualize data. I'm an experienced public speaker and author, dedicated to inclusivity in the STEM fields.

Professional Experience

- Senior Data Scientist, Precision Medicine 2018 - present
Elsevier
- Lecturer, University of California, Los Angeles 2018
Mathematics for Life Scientists. Introduction to the use of calculus in the analysis of biological systems.
- Postdoctoral Fellow, University of California, Los Angeles 2016 - 2018
Developed new stochastic population models and Bayesian statistical frameworks for insect populations.
- Postdoctoral Fellow, Yale University 2012 - 2015
Built stochastic community models and validated novel statistical methods across data sets.
- National Science Foundation Fellow, University of California, Berkeley 2010 - 2012
Developed and tested a novel Bayesian statistical framework (ABC) for experimental time series data.
- Graduate Student Researcher, University of California, Berkeley 2007 - 2010
Extended and applied survival analysis (time-to-event) models to insect life cycle data.

Education

- Ph.D., University of California, Berkeley 2006 - 2012
Developed frequentist and Bayesian statistical frameworks for hierarchical experimental designs in ecology
- B.Sc., McGill University 2000 - 2005
Major in Biology, Minor in Mathematics and Statistics

Skills

Statistical Modeling: hypothesis testing, experimental design, bootstrap resampling, mixed-effects regression, survival analysis, classification theory, approximate Bayesian computation (ABC), Markov chain Monte Carlo and sequential Monte Carlo (particle filter) algorithms.

Numerical Modeling: linear algebra (matrix modeling), ordinary and delay differential equation modeling, stochastic branching processes, Gillespie algorithms.

Programming Languages and Software: R, Python, Jupyter, L^AT_EX, distributed computing with AWS EC2 and private (university) high performance clusters. Some experience with Matlab and Mathematica. Familiar with Fortran, Java, and C++.

Communication: Experienced public speaker for audiences including potential donors (non-technical), university students, and technical experts. Author on 9 peer-reviewed publications.

Service and Outreach: Founder and Organizer of R-Ladies Los Angeles, Women In Science at Yale mentor, Coordinator and Planning Committee member, Expanding Your Horizons conference.

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