Cora Allen-Savietta

Statistics PhD Candidate

Statistician with 7 years of theoretical and applied statistics experience and 2 years of software development experience. Currently developing software in Julia for efficient search, estimation & model comparison in complex network space.

Education

PhD Statistics University of Wisconsin-Madison
expected December 2020

BA Psychology Oberlin College
high honors

Research Experience

2018-03 - present

Statistics Research Assistant

Professor Cécile Ané, University of Wisconsin–Madison

- Develop software in **Julia** to reconstruct species' evolutionary history by combining efficient algorithms, novel search strategies, and efficient likelihood comparison. github.com/crsl4/PhyloNetworks.jl

2016-05 - present

Statistics Research Assistant

Professor Ron Gangnon, University of Wisconsin–Madison

- Develop a statistical method for flexible weighted clustered rankings using empirical Bayes nonparametric mixture models

2016-05 - present

Lead Data Analyst

University of Wisconsin-Madison Department of Epidemiology

- Assess breast cancer incidence and survival in a case-control study of over 26,000 women with generalized multivariate additive spatial models, covariate imputation, and variable width smoothing in **R**.

2018-02 - 2019-03

Lead Data Analyst

University of Wisconsin-Madison Department of Medicine

- Evaluated program success with multivariate generalized linear mixed effects models in **R**.

2012-06 - 2015-08

Epidemiology Research Assistant

Harvard Medical School & Brigham and Women's Hospital

- Led a clinical trial, supervising a team of five research assistants through patient recruitment and data analysis with **R**
- Managed large-scale healthcare claims data using **SAS**
- Assisted in design, analysis, and publication of pharmaceutical postmarketing surveillance studies

Teaching and Mentoring Experience

2018-09 - 2018-12

Teaching Assistant for STAT 679: Computational Tools for Data Analytics

- Taught 42 graduate students **Bash** scripting, **Python**, & **Julia**.
- Mentored students individually and in small groups through pair programming and **GitHub** code review.

Personal Info

Location
Madison, WI

Phone
608-239-4068

E-mail
allencoleman@wisc.edu

GitHub
github.com/coraallensavietta

Skills

Julia

R

Python

Bash

Java

Awards

2020-08
National Science Foundation
Institute for Foundations for Data Science Research Support

2017-07
National Institutes of Health
Data Science Traineeship

2015-09
National Institutes of Health
Biostatistics Traineeship

2012-03
Leah Freed Memorial Prize for Honors Thesis Research

2012-01
Jerome Davis Prize for Social Science Thesis Research

Professional Memberships

American Statistical Association

Caucus for Women in Statistics

2016-01 - 2018-05

Undergraduate & Graduate Student Mentoring

- Mentored 6 Statistics undergraduates in preparing honors thesis projects.
- Tutored 7 undergraduates and graduate students in Statistics courses weekly.

2015-09 - 2015-12

Teaching Assistant for BMI 511: Introduction to Biostatistics

- Introduced 40 Masters of Public Health students to probability, research design, hypothesis testing, statistical inference, and regression.
- Taught one lecture per week and mentored students independently.

Peer-reviewed Publications

Allen-Savietta, C, Ané, C. Phylogenetic Network Structure Estimation and Identifiability from Concatenated Genetic Sequences. *In preparation.*

Heffron, A, Braun, KM, **Allen-Savietta, C**, Filut, A, Hanewall, C, Huttenlocher, A, Handelsman, J, Carnes, M. Gender Can Influence Student Experiences in MD-PhD Training. *Journal of Women's Health.* April 2020.

Fischer MA, **Allen-Coleman C**, Farrell SF, Schneeweiss S. Stakeholder assessment of comparative effectiveness research needs for Medicaid populations. *Journal of Comparative Effectiveness Research*. 2015 Sept 21.

Bateman BT, Huybrechts KF, Maeda A, Desai RJ, Patorno E, Seely EW, Ecker JL, **Allen-Coleman C**, Mogun H, Hernandez-Diaz S, Fischer MA. Calcium channel blocker exposure in late pregnancy and the risk of neonatal seizures: A cohort study. *Obstetrics and Gynecology.* 2015 Aug; 126(2): 271-8.

Bateman BT, Hernandez-Diaz S, Fischer MA, Seely EW, Ecker JL, Franklin JM, Desai RJ, **Allen-Coleman C**, Mogun H, Avorn J, Huybrechts KF. Statins and congenital malformations: a cohort study. *BMJ.* 2015 Mar 17;350:h1035.

Polinski JM, Kesselheim AS, Frolkis JP, Wescott P, **Allen-Coleman C**, Fischer MA. A matter of trust: Patient barriers to primary medication adherence. *Health Education Research.* 2014; 29: 755-63.

Conference Presentations

Allen-Coleman, C., Ané, Cécile M. Illuminate Evolutionary History with Phylogenetic Networks. Joint Statistical Meetings in August 2019

Allen-Coleman, C., Ané, Cécile M. Estimating Evolutionary Rates Efficiently in Phylogenetic Networks. Great Lakes Bioinformatics Conference May 2019

Allen-Coleman, C., Gangnon, R.E. Simultaneous Clustering and Ranking of Small Area Health Outcomes Using Nonparametric Empirical Bayes Mixture Models. Contributed presentation at the International Conference on Health Policy Statistics January 2020 (accepted)

Allen-Coleman, C., Gangnon, R.E. Making Ranking Priorities More Explicit. Contributed presentation at Joint Statistical Meetings August 2018

Allen-Coleman, C., Trentham-Dietz, A., McElroy, J.A., Hampton, J.A., Newcomb, P.A., Gangnon, R.E. Geographic Location and Mortality after Breast Cancer Diagnosis. Society for Epidemiologic Research Meeting June 2018