







SAMANTHA C. TYNER, PH.D.

EDUCATION

- Aug. 2019
|
Dec. 2017
- **Postdoctoral Research Associate**
CSAFE, Iowa State University  Ames, IA
 - PI: Alicia Carriquiry
- Dec. 2017
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Aug. 2012
- **Ph.D., Statistics; M.S. Statistics**
Iowa State University  Ames, IA
 - Dissertation: *Graphical discovery in stochastic actor-oriented models for social network analysis*
 - Advisor: Heike Hofmann
- May 2012
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Aug. 2008
- **B.A., Mathematics, Economics, French**
Augustana College  Rock Island, IL
 - *Summa cum laude*
 - Phi Beta Kappa, Pi Mu Epsilon, Omicron Delta Kappa, Dean's List






PROFESSIONAL EXPERIENCE

- Present
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Sep. 2019
- **AAAS Science & Technology Policy Fellow**
Bureau of Labor Statistics, Office of Survey Methods Research  Washington, D.C.
 - Develop interactive visualization applications using R Shiny
 - Utilize tweets as data to assess public perception of the Bureau and influence communications policy
 - About the AAAS STPF program¹
- Aug. 2019
|
Dec. 2017
- **Postdoctoral Research Associate**
Center for Statistics & Applications in Forensic Evidence (CSAFE), Iowa State University  Ames, IA
 - Coordinate the summer research experience for undergraduates (REU) from partner schools
 - Mentor graduate students on their research projects
 - Continue work from time as graduate research assistant
- Dec. 2017
|
Aug. 2015
- **Graduate Research Assistant**
CSAFE, Iowa State University  Ames, IA
 - Author educational materials for legal professionals on the use of statistics in forensic science
 - Conduct research relating to human factors, statistical computing in forensic science



View this CV online with links at sctyner.github.io/cv

CONTACT

 sctyner90@gmail.com
 [sctyner](https://twitter.com/sctyner)
 github.com/sctyner
 sctyner.github.io
 linkedin.com/in/sctyner

LANGUAGE SKILLS



Made with the R package [pagedown](https://github.com/jgm/pagedown).

The source code is available at github.com/sctyner/cv.

Last updated on 2020-04-29.

Aug. 2017
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May. 2017

● **REU Graduate Student Advisor**

CSAFE, Iowa State University

📍 Ames, IA

- Instructed a group of ten students on R coding, statistics, and Github project management
- Supervised research projects on automated shoeprint matching and steganalysis

Aug. 2016
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May. 2016

● **Graduate Student Fellow, Data Science for Public Good**

Social and Decision Analytics Laboratory, Biocomplexity Institute, Virginia Polytechnic Institute and State University

📍 Arlington, VA

- Analyzed and combined data from a variety of administrative, census, and GIS sources
- Consulted with county staff on projects to improve government services in Arlington, VA
- Led groups of undergraduate researchers on data-driven policy projects

Apr. 2016
|
Aug. 2015

● **Graduate Research Assistant**

NORC at the University of Chicago

📍 Ames, IA

- Developed a dynamic reporting system to adapt to changes in Illinois' healthcare marketplace
- Continuation of my summer internship work part time as a consultant

Aug. 2015
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May. 2015

● **Data Visualization Intern**

NORC at the University of Chicago

📍 Chicago, IL

- Designed a multi-use dashboard of education data in Washington state
- Developed a web app with public health, GIS data to uncover potential epidemic regions
- Led four hour-long internal seminars on the theory and best practices of data visualization

May. 2015
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Aug. 2014

● **Graduate Teaching Assistant**

Dept. of Statistics, Iowa State University

📍 Ames, IA

- Instructor for STAT 104: Introduction to Statistics
- Taught weekly lectures and labs
- Wrote and graded exams

Aug. 2014
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May. 2014

● **Statistical Analyst Intern, Process Management Team**

Kingland Systems Corporation

📍 Ames, IA

- Performed data analysis on project and product data to refine internal processes and tools
- Built predictive models used in planning and estimating time to complete software development
- Produced graphs and reports to support internal visibility of projects, products, and portfolios

Aug. 2014
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Aug. 2013

● **Graduate Research Assistant**

Institute for Transportation, Iowa State University

📍 Ames, IA

- Modeled curve navigation on rural highways using large USDOT data sets

Jul. 2013
|
Aug. 2012



Graduate Teaching Assistant

Dept. of Statistics, Iowa State University

📍 Ames, IA

- TA for STAT 104: Introduction to Statistics
- Graded weekly homework assignments
- Supervised lab sections twice weekly



HONORS & AWARDS

Feb. 2018



Winner, 2018 rOpenSci Fellowship

For proposal, “Open Forensic Science in R”

📍 Ames, IA

- Please see ropensci.org² for more.

Jul. 2016



Winner, Student Paper Competition

Statistical Graphics Section of the American Statistical Association

📍 Chicago, IL

- For “Using the geomnet Package”. See Publications
- Awarded at JSM 2016³

Sept. 2015



Runner-up, Young Statisticians Writing Competition

Young Statisticians Section of the Royal Statistical Society

📍 Exeter, Devon, UK

- For “The Joy of Clustering.” See publications.
- Awarded at RSS 2015⁴

Aug. 2012



Alumni Fellowship

Dept. of Statistics, Iowa State University

📍 Ames, IA



PUBLICATIONS

2020



Estimating arthropod survival probability from field counts: a case study with monarch butterflies

Ecosphere 11(4):e03082. April 2020

📍 Ames, IA

- with Tyler J. Grant (1st), D. T. T. Flockhart, T. R. Blader, R. L. Hellmich G. M. Pitman, D. R. Norris, and S. P. Bradbury
- !DOI⁶](<https://doi.org/10.1002/ecs2.3082>)

2019



Evaluation and comparison of methods for forensic glass source conclusions

Forensic Science International, Volume 305, December 2019, 110003

📍 Ames, IA

- with Soyoung Park (1st)
- !DOI⁷](<https://doi.org/10.1016/j.forsciint.2019.110003>)

2019



Open Forensic Science in R

Editor, published online

📍 Ames, IA

- !DOI⁸](<https://doi.org/10.5281/zenodo.3418141>)

I also enjoy writing about my work and sharing my talks on my blog⁵.

- 2017

● **Network Visualization with ggplot2**

The R Journal. 9(1): 27-59. June 2017

 - with François Briatte and Heike Hofmann
 - !DOI[?]](<https://doi.org/10.32614/RJ-2017-023>)

📍 Ames, IA
- 2016

● **Using the R Package geomnet: Visualizing Trans-Atlantic Slave Trade of Africans, 1514-1866**

CHANCE. Sep. 2016. 29(3)

 - !DOI^{1?}](<https://doi.org/10.1080/09332480.2016.1234879>)

📍 Ames, IA
- 2015

● **The Joy of Clustering**

[Significance Magazine Online](#). 11 Nov. 2015

📍 Ames, IA
- 2015

● **Evaluation of driving behavior on rural 2-lane curves using the SHRP 2 naturalistic driving study data**

Journal of Safety Research. 2015. 54, 17-27.

 - with Shauna Hallmark (1st), Nicole Oneyear, Cher Carney, and Dan McGehee
 - !DOI^{1?}](<https://doi.org/10.1016/j.jsr.2015.06.017>)

📍 Ames, IA
- 2012

● **Non-Contiguous Pattern Avoidance in Binary Trees**

Electronic Journal of Combinatorics. 2012. 19(3). #P22

 - with Michael Dairyko, Lara Pudwell, and Casey Wynn
 - !DOI^{1?}](<https://doi.org/10.37236/2099>)

📍 Valparaiso, IN



LEADERSHIP & SERVICE

- Apr. 2019

Jul. 2019

Aug. 2018

● **Founder & Co-organizer of the Uncoast Unconference¹³**

Hackathon-style event for R users and developers living in middle America.

📍 Des Moines, IA
- Jul. 2019

Aug. 2018

● **Iowa State University Postdoctoral Association**

Elected as the postdoctoral representative to the University Committee for the Advancement of Women and Gender Equity to voice the interests of women+-identifying postdocs on campus.

📍 Ames, IA
- Apr. 2019

Apr. 2018

● **Webmaster, Iowa Chapter of the ASA**

Maintain the online presence of the Iowa chapter of the American Statistical Association, the country's top professional association for statisticians

📍 Ames, IA
- Aug. 2019

Dec. 2016

● **Co-founder and co-organizer, R-Ladies Ames**

Founded the Ames chapter of the global organization R-Ladies, which promotes gender parity among R users, R package authors, and members of the R foundation and board of directors

📍 Ames, IA

 - with Natalia daSilva

I am deeply passionate about creating and fostering a welcoming community in my professional life.

May 2017
|
Aug. 2014



Statistics Departmental Committees

Served alongside faculty and staff as the student member of ISU statistics departmental committees: the Social Committee (2014-15) and the Honors and Awards Committee (2015-16, 2016-17).

📍 Ames, IA

May 2016
|
Aug. 2013



The Iowa STAT-ers Club

Led this Statistics Department graduate student organization in multiple executive positions: Secretary (2013-14), Social Chair (2014-15), and President (2015-16).

📍 Ames, IA



WORKSHOPS TAUGHT

May 2018



R for Epidemiology

Intensive workshop on the basics of R, data cleaning, and visualization using R and RStudio with application to epidemiological data. Presented at the USDA's National Animal Disease Center.

📍 Ames, IA

• with Haley Jeppson

Dec. 2018



The Life-Changing Magic of Tidying Data

Workshop on tidying messy data sets with the R packages dplyr, tidyr, and others. Presented to the R-Ladies Ames group.

📍 Ames, IA

Jun 2017



The Week of R

Intensive workshop on the basics of R, as well as data cleaning, webscraping, data visualization, and Shiny in R and RStudio.

📍 Ames, IA

Feb. 2017



Webscraping with tidyverse Packages

Workshop on scraping data from the web using the R packages rvest, xml, and others. Presented to the R-Ladies Ames group.

📍 Ames, IA

• with Jo Papio, Haley Jeppson, and Heike Hofmann

Oct. 2016



Empowering Women with Self-defense Skills using R

Workshop on data cleaning, webscraping, and data visualization in R. Presented at the 2016 Women in Statistics and Data Science conference.

📍 Charlotte, NC

• TA for Heike Hofmann

May 2016



The Week of R

Intensive workshop on the basics of R, as well as data cleaning, webscraping, data visualization, and Shiny in R and RStudio. Presented at Iowa State University.

📍 Ames, IA

• with Eric Hare, Andee Kaplan, and Heike Hofmann

I love teaching R workshops to any audience! I have taught undergraduates, graduate students, and professionals of all levels.



LINKS

- 1: <https://www.aaas.org/programs/science-technology-policy-fellowships/overview>
- 2: <https://ropensci.org/blog/2018/02/14/announcing-2018-ropensci-fellows/>
- 3: <https://www2.amstat.org/meetings/jsm/2016/>
- 4: https://www.rss.org.uk/RSS/Events/Conference/2015_conference.aspx?WebsiteKey=bc86df55-c2ae-4d73-8450-66ecc8988ded&hkey=2a432b6b-6baf-4bc3-baa4-063221c13ab8
- 5: <https://sctyner.github.io/blog.html>
- 6: <https://img.shields.io/static/v1?label=DOI&message=10.1002/ecs2.3082&color=ae027e>
- 7: <https://img.shields.io/static/v1?label=DOI&message=10.1016/j.forsciint.2019.110003&color=ae027e>
- 8: <https://img.shields.io/static/v1?label=DOI&message=10.5281/zenodo.3418141&color=ae027e>
- 9: <https://img.shields.io/static/v1?label=DOI&message=10.32614/RJ-2017-023&color=ae027e>
- 10: <https://img.shields.io/static/v1?label=DOI&message=10.1080/09332480.2016.1234879&color=ae027e>
- 11: <https://img.shields.io/static/v1?label=DOI&message=10.1016/j.jsr.2015.06.017&color=ae027e>
- 12: <https://img.shields.io/static/v1?label=DOI&message=10.37236/2099&color=ae027e>
- 13: <http://uuconf.rbind.io>