NICK STRAYER

Currently searching for a post-doctoral position in biostatistics/informatics

EDUCATION

2011 | 2015

University of Vermont
B.S., mathematics, statistics — Burlington, VT

Minored in computer science

Thesis: An agent based model of Diel Vertical Migration patterns of Mysis diluviana

2015 | 2020

Vanderbilt University
PhD. Candidate, biostatistics — Nashville, TN

Dissertation on Bayesian network model fitting and visualization

University Graduate Fellow

RESEARCH EXPERIENCE

2012 | 2013

Research Assistant
Adair Laboratory — University of Vermont

- Independently analyzed and constructed statistical models for large data sets pertaining to carbon decomposition rates.

2013 | 2014

Undergraduate Researcher
Bentil Laboratory — University of Vermont

- Developing mathematical model to predict the transport of sulfur through the environment with applications in waste cleanup.

2013 | 2015

Undergraduate Researcher
Rubenstein Ecosystems Science Laboratory — University of Vermont

- Analyzed and visualized data for CATOS fish tracking project.
- Head of data mining project to establish temporal trends in population densities of Mysis diluviana (Mysis).
- Ran project to mathematically model the migration patterns of Mysis (honors thesis project.)

2015

Human Computer Interaction Researcher
LabInTheWild (Reineke Lab) — University of Michigan

- Led development and implementation of interactive data visualizations to help users compare themselves to other demographics.

CONTACT

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(734) 645-0110

SKILLS

5 years of experience developing data visualizations in academic, industry, and journalism contexts.

Highly experienced in R, Python, and Javascript. Work heavily with Bash, SQL, C++, and AWK.

*Made with the R package **pagedown**.*

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

Last updated on 2019-07-22.

2015 | 2020

Graduate Research Assistant
TBILab — Vanderbilt University Medical Center
- Primarilly working with large EHR and Biobank datasets.
- Developing network-based methods to investigate and visualize clinically relevant patterns in data.

2017

Data Science Researcher
Johns Hopkins Data Science Lab — Baltimore, MD
- Building R Shiny applications in the contexts of wearables and statistics education.
- Work primarily done in R Shiny and Javascript (node and d3js).

INDUSTRY EXPERIENCE

2014

Software Engineering Intern
Conduce — Carpinteria, CA
- Incorporated d3.js to the company's main software platform.

2015

Engineering Intern - User Experience,
Dealer.com — Burlington, VT
- Worked to help analyze and visualize user interaction with backend products.

2015

Data Science Intern,
Dealer.com — Burlington, VT
- Worked with the product analytics team to help parse and visualize large stores of data.

2014 | 2015

Data Artist In Residence
Conduce — Carpinteria, CA
- Envisioned, prototyped and implemented visualization framework in the course of one month.
- Constructed training protocol for bringing third parties up to speed with new protocol.

2016

Data Journalist - Graphics Department
New York Times — New York, New York
- Reporter with the graphics desk covering topics in science, politics, and sport.
- Work primarily done in R, Javascript, and Adobe Illustrator.

TEACHING EXPERIENCE

2017

Statistical Computing in R
Vanderbilt Biostatistics Department — Nashville, TN
- TA and lectured
- Covered introduction to R language for statistics applications
- Graduate level class

2017 | 2018

Advanced Statistical Learning and Inference
Vanderbilt Biostatistics Department — Nashville, TN

- TA and lectured
- Topics covered from penalized regression to boosted trees and neural networks
- 3rd year PhD level class

2018

Advanced Statistical Computing
Vanderbilt Biostatistics Department — Nashville, TN

- TA and lectured
- Covered modern statistical computing algorithms
- 4th year PhD level class

2019

Data Visualization Best Practices
DataCamp

- Designed from bottom up course to teach best practices for scientific visualizations.
- Uses R and ggplot2.

2019

Improving your visualization in Python
DataCamp

- Designed from bottom up course to teach advanced methods for enhancing visualization.
- Uses python, matplotlib, and seaborn.

PRESS (ABOUT AND BY)

2017

Great paper? Swipe right on the new 'Tinder for preprints' app
Science

Story of the app Papr made with Jeff Leek and Lucy D'Agostino McGowan.

2017

Swipe right for science: Papr app is 'Tinder for preprints'
Nature News

Second press article for app Papr.

2016

The Deeper Story in the Data
University of Vermont Quarterly

Story on my path post graduation and the power of narrative

2016

The Great Student Migration
The New York Times

Most shared article from the New York Times for three days.

2016

Wildfires are Getting Worse, The New York Times
The New York Times

Data in collaboration with NASA and USGS

2016 **Who's Speaking at the Democratic National Convention?**
The New York Times
Data scraped from CSPAN records to figure out who talked and past conventions.

2016 **Who's Speaking at the Republican National Convention?**
The New York Times
Data scraped from CSPAN records to figure out who talked and past conventions.

2016 **A Trail of Terror in Nice, Block by Block**
The New York Times
Led research effort to put togther story of 2016 terrorist attack in Nice, France in less than 12 hours. Work won Silver medal at Malofiej 2017, and gold at Society of News and Design.

SELECTED PUBLICATIONS, POSTERS, AND TALKS

2015 **Asymmetric Linkage Disequilibrium: Tools for Dissecting Multiallelic LD**
Journal of Human Immunology
Authored with Richard Single, Vanja Paunic, Mark Albrecht, and Martin Maiers.

2015 **An Agent Based Model of Mysis Migration**
International Association of Great Lakes Research Conference
Authored with Brian O'Malley, Sture Hansson, and Jason Stockwell.

2015 **Declines of Mysis diluviana in the Great Lakes**
Journal of Great Lakes Research
Authored with Peter Euclide and Jason Stockwell.

2017 **Continuous Classification using Deep Neural Networks**
Vanderbilt Biostatistics Qualification Exam

2018 **Charge Reductions Associated with Shortening Time to Recovery in Septic Shock**
Chest
Authored with Wesley H. Self, MD MPH; Dandan Liu, PhD; Stephan Russ, MD, MPH; Michael J. Ward, MD, PhD, MBA; Nathan I. Shapiro, MD, MPH; Todd W. Rice, MD, MSc; Matthew W. Semler, MD, MSc.

2018 **R timelineViz: Visualizing the distribution of study events in longitudinal studies**
Under-Review (copy available upon request.)
Authored with Alex Sunderman of the Vanderbilt Department of Epidemiology.

2019 **Multimorbidity Explorer | A shiny app for exploring EHR and biobank data**
RStudio::conf 2019
Invited Poster. Authored with Yaomin Xu.

I regularly blog about data science and visualization on my blog LiveFreeOrDichotomize.

2019

Taking a network view of EHR and Biobank data to find explainable multivariate patterns

Vanderbilt Biostatistics Seminar Series