Benjamin E. Noland

609-851-1137
benjaminnoland93@gmail.com
http://bnoland.github.io/

Education

- **MS in statistics, Rutgers University**, New Brunswick, NJ
  September 2017–May 2019 (expected)
- **BA in mathematics, Rutgers University**, New Brunswick, NJ (*cum laude*)
  September 2012–May 2016
  Minor in physics
  School of Arts and Sciences Honors Program

Skills

Statistics and data analysis skills:

- Knowledge of statistical theory (classical and some Bayesian).
- Knowledge of a variety of modeling techniques (for both inference and prediction).
  - Ordinary least squares regression
  - Time series analysis
  - Multivariate analysis
  - Generalized linear models (e.g., logistic and Poisson regression)
  - Penalized linear regression methods (ridge regression and the LASSO)
  - Classification methods (e.g., logistic regression, LDA, QDA, KNN, SVMs)
  - Bootstrapping methods
  - Unsupervised techniques (e.g., clustering methods and PCA)
  - Deep learning and neural networks
  - Others (e.g., spline methods and tree-based methods)
- Proficient in data processing using R (including data wrangling, modeling, and visualization), as well as building web applications with Shiny.
- Some experience with Stata, as well as some with SciPy/Jupyter.

Computer skills:

- **Proficient with:** R, Python, C, Java, LaTeX, Unix, Windows, Git, Microsoft Office (and similar tools)
- **Experience with:** MATLAB, Stata, SciPy/Jupyter, JavaScript (including JQuery), HTML, CSS, PHP, MySQL, x86 assembly language
- **GitHub account:** https://github.com/bnoland

Experience

Part-time research assistant
School of Management and Labor Relations, Rutgers University, New Brunswick, NJ
May 2018–May 2019

- Designed and implemented a web application to explore the unionization trends of registered nurses in the United States using Current Population Survey (CPS) data.
- The application allows the user to select, aggregate, and visualize the data to explore union membership and union contract coverage rates.
- The application was built using R and Shiny. It is currently available at:

  `https://bnoland.shinyapps.io/nurses_web_tool/`

  The latest version of the code can be found at:

  `https://github.com/bnoland/nurses_web_tool`

- Wrote extensive documentation for the tool.

Independent mathematics tutor
Mercer County Community College, West Windsor, NJ
May 2017–July 2017

- Established an independent tutoring service.
- Tutored students from Mercer County Community College in mathematics (mainly calculus and precalculus).

Programming intern
Alan M. Voorhees Transportation Center, Bloustein School of Planning and Public Policy, Rutgers University, New Brunswick, NJ
June 2016–November 2016

- Designed and implemented R scripts to detect possible groups of riders in Citi Bike trip data. The latest versions of the scripts can be found at:

  `https://github.com/bnoland/citibike`

- Implemented a website for visualizing the results of this study. The latest version can be found at:

  `https://bnoland.github.io/citibike-map/`

Programming intern
Vertices, LLC, New Brunswick, NJ
May 2015–August 2015

- Worked on Mappler, an online geographic information system (GIS) tool. Designed and implemented a feature that allows users to upload images, extracts GPS data from the images, and adds them to the map database.

- Implemented a daemon for extracting images and associated GPS data from email accounts and adding them to a map database.

Programming intern
Alan M. Voorhees Transportation Center, Bloustein School of Planning and Public Policy, Rutgers University, New Brunswick, NJ
July 2014–August 2014

- Designed and implemented a website that maps crashes involving vehicles and pedestrians (including bicyclists) using data provided by the New Jersey Department of Transportation.
- The site allows the user to submit search queries to filter the data. The site can be found at:

`http://pppolicy.rutgers.edu/vtcdata/pedestrian/pedmap.html`

Extracurricular Activities

Head of Computer Club
Princeton High School, Princeton, NJ
September 2009–February 2012

- Worked with club members towards developing a robot that could navigate a maze.
- Organized fundraising for the club.
- Taught other students the basics of programming.

Honors

- **2014 Rutgers Academic Excellence Award**, April 2014
- **Princeton High School Computer Science Award**, June 2012