Benjamin E. Noland

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http://bnoland.github.io/

Education

- **Rutgers University**, New Brunswick, NJ, September 2017–May 2019 (expected)
  MS in statistics
- **Rutgers University**, New Brunswick, NJ, September 2012–May 2016
  BA in mathematics, minor in physics (*cum laude*)
  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 linear regression
  - 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–September 2018

- 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 may be found at:

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

- Wrote extensive documentation for the tool.

Programming intern
Voorhees Transportation Center, 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 may be found at:

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

- Implemented a website for visualizing the results of this study. The latest version may 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
Voorhees Transportation Center, 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