

# Benjamin E. Noland

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<http://bnoland.github.io/>

## Education

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- **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

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### 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, L<sup>A</sup>T<sub>E</sub>X, 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

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## *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/](https://bnoland.shinyapps.io/nurses_web_tool/)

The latest version of the code can be found at:

[https://github.com/bnoland/nurses\\_web\\_tool](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 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 Mapper, 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://ppppolicy.rutgers.edu/vtcddata/pedestrian/pedmap.html>

## Extracurricular Activities

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### *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

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