

# Travis T. Byrum

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## Education

- 2013 **B.S. Statistics and B.A. Political Science**, *Duke University*, Durham, NC.  
Coursework Includes: Multivariable Calculus, Linear Algebra, Probability, Mathematical Statistics, Data Analysis/Statistical Inference, Regression Analysis, Bayesian/Modern Statistics, Decision Theory, Statistical Consulting, Survey Statistics  
Senior Thesis: *Wavelet-Based Functional Modeling of Accelerometer Data in Fitness Intervention Study*  
Dean's List Fall 2011, Fall 2012, and Fall 2013

## Technical Skills

- Languages: R, Python, MySQL, PostgreSQL,  $\LaTeX$ , Markdown  
Tools: IPython, matplotlib, numpy, scikit-learn, BeautifulSoup, caret, Shiny, ggplot2, git, Github, Sweave, knitr, Unix Utilities, AWS, Microsoft Office, Qualtrics  
Statistics and Machine Learning: Classification, Regression, Mixed-Effects Models, Clustering, Ensembles, Dimensionality Reduction, Hypothesis Testing, Decision Analysis, Bayesian Statistics, Nonparametric Methods, Data Visualization

## Experience

- October 2015 **Morning Consult Data Scientist**, Washington, DC.  
- Current
  - Work directly with company co-founders on all phases of polling projects including survey creation, monitoring, and data analysis (research has been cited by: *The Washington Post*, *Vox*, *Bloomberg*, *New York Times*, *The Hill*, *ABC*, *Huffington Post*, *538*, *Fortune Magazine*, among others)
  - Helped to improve statistical standards and develop best practices for the company's polling methodology
  - Constructed and validated state and congressional-level election forecasts based off national surveys using multilevel regression and post-stratification (MRP)
  - Developed R package to automate in-house modeling and data visualization
- October 2014 **Milwaukee Bucks Analytics Intern**, Milwaukee, WI.  
- June 2015
  - Used the web application framework Shiny in the R programming environment to create a portal for distributing important information to coaches and front office employees
  - Constructed statistical models for tasks such as forecasting career outcomes for drafted players and predicting the efficiency of lineup combinations
  - Designed a framework for performance metrics to aid in player evaluation using several statistical methods
  - Worked directly under the Bucks' Director of Analytics along with front office employees and coaches to assist in evaluating the team's on-court performance
- June **North Carolina Common Sense Analyst**, Durham, NC.  
2013-April
  - Synthesized North Carolina government finances for public viewing as part of a Duke student-led public policy initiative
  - Quantified information on state budgetary reports using the R programming environment and assisted the team's coders in creating data visualizations
- August-December 2013 **Teaching Assistant, Duke Statistics Department**, Durham, NC.
  - Helped conduct the *Probability/Statistics in Engineering* course at Duke University
  - Instructed one of the course's associated lab sections
  - Assisted students during office hours