

# 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 - Current **Morning Consult Data Scientist**, Washington, DC.  
○ 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*, *New York Times*, 538, *Fortune Magazine*, *The Hill*, *ABC*, *Huffington Post*, *Vox*, *Bloomberg*, among others)  
○ Improved statistical standards and developed best practices for the company's polling methodology  
○ Constructed and validated state and congressional-level election forecasts based on national surveys using multilevel regression and post-stratification (MRP)  
○ Developed R package to automate in-house modeling and data visualization
- October 2014 - June 2015 **Milwaukee Bucks Analytics Intern**, Milwaukee, WI.  
○ 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 2013-April 2014 **North Carolina Common Sense Analyst**, Durham, NC.  
○ 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