

Travis T. Byrum

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Education

Duke University

Durham, NC

B.S. Statistics and B.A. Political Science

2013

- 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, L^AT_EX, Markdown, JavaScript, HTML

Tools: IPython, matplotlib, numpy, scikit-learn, Flask, 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

- *Morning Consult Data Scientist* *October 2015 - 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*, *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
- *Milwaukee Bucks Analytics Intern* *October 2014 - June 2015*
 - Used the web application framework Shiny in the R programming environment to create a portal for distributing strategic 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
- *North Carolina Common Sense Analyst* *June 2013-April 2014*
 - Synthesized North Carolina government finances for public viewing as part of a Duke student-led public policy initiative
 - Conducted statistical and policy analysis on state budgetary operations
 - Quantified information on state budgetary reports using the R programming environment and assisted the team's coders in creating data visualizations
- *Teaching Assistant, Duke Statistics Department* *August-December 2013*
 - 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