Travis T. Byrum

Data Scientist

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Education

Duke University *Durham, NC*

B.S. Statistics and B.A. Political Science *2009 - 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, 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

Data Scientist *Washington, D.C.*

Morning Consult *October 2015 - Present*

- 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

Analytics Intern *Milwaukee, WI.*

Milwaukee Bucks *October 2014 - 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

North Carolina Common Sense *Durham, NC.*

Analyst *June 2013 - April 2014*

- 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

Duke Statistics Department *Durham, NC.*

Teaching Assistant *August 2013 - 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