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, SQL, LaTeX, Markdown, JavaScript, CSS, HTML, Java

Tools: IPython, scikit-learn, Flask, BeautifulSoup, D3.js, caret, Shiny, ggplot2, git, Sweave, knitr, Unix Utilities, AWS, MySQL, PostgreSQL

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***)
  - Write and maintain software packages for in-house modeling and data visualizations using Python and R
  - Developed data infrastructure and API integrations for automatic reporting
  - Constructed and validated state and congressional-level election forecasts based on national surveys using multilevel regression and post-stratification (MRP)
- *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