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travisbyrum

Travis T. Byrum

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 companys 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 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

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