

Andrew Sage

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Department of Statistics
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EDUCATION

Iowa State University, Ames, Iowa

Degree: Ph.D. in Statistics Expected 2018

Dissertation Topic: Random forest robustness and variable importance

Advisors: Ulrike Genschel, Dan Nettleton

Iowa State University, Ames, Iowa

Degree: Master of Science in Statistics, 2015

Master's Project: *Predicting Student Retention in STEM:
A Random Forest Based Approach*

Advisor: Dan Nettleton

Miami University, Oxford, Ohio

Degree: Master of Science in Mathematics, 2013

Master's Project: *Calculation of Cell Bounds for
Contingency Tables from Rounded Conditional Frequencies*

Advisor: Stephen Wright

The College of Wooster, Wooster, Ohio,

Degree: Bachelor of Arts, 2007

Major: Mathematics

Summa Cum Laude

TEACHING/MENTORING EXPERIENCE

Iowa State University, Ames, Iowa

Graduate teaching assistant, Department of Statistics

Courses taught as instructor:

- probability and statistics for engineering Spring 2017
- probability and statistics for computer science Fall 2016
- introductory statistics Fall 2014

Other teaching/mentoring at Iowa State

- Graduate mentor for Freshman Honors Project by Cameron Stocker: Association between top scorer performance metrics and winning percentage in the NBA With faculty advisor Dan Nettleton Spring 2017
- Lab instructor for survey sampling techniques Spring 2014

Miami University, Oxford, Ohio

Graduate teaching assistant, Department of Mathematics

Courses taught as instructor:

- precalculus (taught 3 times) 2011-2012
- calculus I Spring 2013

Bloomfield High School, North Bloomfield, Ohio

High school mathematics teacher

2007-2011

Ashtabula County Joint Vocational School, Jefferson, Ohio

High school mathematics teacher

2007-2008

RESEARCH EXPERIENCE

Iowa State University, Ames, Iowa

Research assistant, Department of Statistics

2015-present

Advisor: Ulrike Genschel

- Developed a predictive model to identify undergraduate students at risk of dropping out of STEM majors

Iowa State University, Ames, Iowa

Research assistant, Center for Survey Statistics and Methodology

2013

Advisor: Cindy Yu

- Investigated temporal design for National Resource Inventory rangeland longitudinal study

College of Wooster, Wooster, Ohio

2006

Undergraduate Applied Mathematics Research Experience

Advisor: John Ramsay

- Wrote Excel-based program to project completion times for tire tests at The Goodyear Tire and Rubber Company

AWARDS/RECOGNITION

- Effective Graduate Teaching Award, Dept. of Mathematics, Miami Univ. 2013
- SIAM Graduate Student Award, Dept. of Mathematics, Miami Univ. 2013

PUBLICATIONS

Sage, A. J., & Wright, S. E. (2016). Obtaining cell counts for contingency tables from rounded conditional frequencies. *European Journal of Operational Research*, 250(1), 91-100.

PRESENTATIONS

“Retention of Students in STEM: An Early Alert Project”

Iowa State Advising Summit, April 28, 2017

“A Walk Through a Random Forest”

Invited Talk, Dordt College, March 23, 2017

“Predicting Student Retention in STEM Majors”

Joint Statistical Meetings, Seattle WA, contributed talk, August 10, 2015

“Predicting Student Retention in STEM: A Random Forest Based Approach”

Masters project defense, Iowa State University, March 27, 2015

“Adaptive Survey Design”

Survey Working Group, Iowa State University, March 14, 2014

“The Factoring Likelihood Approach for Maximum Likelihood Estimation in Cases of Missing Data”

Survey Working Group, Iowa State University, November 20, 2013

“The Effect of Rounding on Disclosure in Contingency Tables”

ASA Iowa Chapter Conference, Ames IA, poster presentation, November 1, 2013

“Calculation of Cell Bounds for Contingency Tables with Rounded Conditional Frequencies”

Masters project defense, Miami University, June 28, 2013

PROFESSIONAL ACTIVITIES/ASSOCIATIONS

- American Statistical Association
- Preparing Future Faculty Associate, Iowa State University
- Project LEA/RN (Learning Enhancement Action / Resource Network)
- Phi Beta Kappa