Andrew Sage

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EDUCATION

Iowa State University, Ames, Iowa
Degree: Ph.D. student 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

TEACHING EXPERIENCE

Iowa State University, Ames, Iowa
Graduate teaching assistant, Department of Statistics
Courses taught:

- probability and statistics for computer science — Fall 2016
- introductory statistics — Fall 2014
- survey sampling techniques (lab instructor) — Spring 2014

Miami University, Oxford, Ohio
Graduate teaching assistant, Department of Mathematics
Courses taught:

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

Bloomfield High School, North Bloomfield, Ohio 2007-2011
High school mathematics teacher

Ashtabula County Joint Vocational School, Jefferson, Ohio 2007-2008
High school mathematics teacher

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
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
- Summa Cum Laude, College of Wooster 2007
- William H. Wilson Prize in mathematics, College of Wooster 2007
- Phi Beta Kappa Induction 2006

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

"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

"What are the Chances? A Study of Probability Functions and Their Theory"
Independent Study defense, College of Wooster, April 2007

"Goodyear Tire Test Center Project"
AMRE Projects Day, College of Wooster, November 2006

"Goodyear Tire Test Scheduling Project"
Summer Research Poster Session, College of Wooster, October 2006

PROFESSIONAL ASSOCIATIONS

- American Statistical Association