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: M.S. in Statistics, — 2015
Master's Project: *Predicting Student Retention in STEM: A Random Forest Based Approach*
Advisor: Dan Nettleton

Miami University, Oxford, Ohio
Degree: M.S. 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: B.A. in Mathematics — 2007
Summa Cum Laude

TEACHING/MENTORING EXPERIENCE

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

- Stat 231: probability and statistics for engineering — S2017, F2017
- Stat 330: probability and statistics for computer science — F2016
- Stat 104: introductory statistics — F2014

Other teaching/mentoring at Iowa State University

- Graduate mentor for Freshman Honors Project by Cameron Stocker with faculty advisor Dan Nettleton — S2017
- Lab instructor for survey sampling techniques — S2014

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

- Math 151: calculus I — S2013
- Math 123: precalculus (taught 3 times) — 2011-2012

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

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

- Jebe Fellowship, Iowa State University — 2013
- Effective Graduate Teaching Award, Dept. of Mathematics, Miami Univ. — 2013
- SIAM Graduate Student Award, Dept. of Mathematics, Miami Univ. — 2013
- William H. Wilson Prize in Mathematics, College of Wooster — 2007
- William Edgar Hoffman Jr. Prize in Education, College of Wooster — 2007
- Whitney E. Stoneburner Prize in Education, College of Wooster — 2007
- Phi Beta Kappa — 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

"Random Forest Variable Importance"
Research Talk for Dordt College Statistical Genetics and Biostatistics Summer Research group visit to Iowa State University, Ames IA, June 29, 2017

"Impact of Working with Real Data on Perceptions of the Importance of Statistical Inference"
Reviewed Poster, United States Conference on Teaching Statistics, State College PA, May 19,2017

"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, Sioux Center, IA, March 23, 2017

"A Walk Through a Random Forest"
Invited Talk, College of Wooster, Wooster OH, December 2, 2016

"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) Working Group, Iowa State University