

Brian R. Gaines

Brian.Gaines@sas.com
<http://brgaines.github.io>

EDUCATION

North Carolina State University, Raleigh, NC

Doctor of Philosophy, Statistics

December 2017

Master of Statistics, Mathematical Statistics Concentration

August 2014

- GPA: 3.8/4.0
- Dissertation: Penalized Estimation in Statistics: Applications & Algorithms

Virginia Commonwealth University, Richmond, VA

Non-degree seeking

August 2007 - May 2011

- GPA: 4.0/4.0
- Completed nine math courses

Indiana University, Bloomington, IN

Bachelor of Arts (High Distinction), Economics & Political Science

May 2007

- GPA: 3.9/4.0
- Phi Beta Kappa

TEACHING EXPERIENCE

North Carolina State University, Raleigh, NC

Instructor

Jan. 2014 – Aug. 2014, June 2015 – May 2016, Aug. 2016 – May 2017

Guest Lecturer

November 2012, March 2015, March 2016, March 2017

Teaching Assistant

Aug. 2011 – Dec. 2013

University of Richmond, Richmond, VA

Guest Lecturer

January 2011

WORK EXPERIENCE

SAS, Cary, NC

Machine Learning Developer

August 2020 – Present

- Research, design, & develop graphical user interfaces for machine learning models
- Produce documentation, articles, & demo videos for customer enablement

Research Statistician Developer

August 2017 – August 2020

- Created graphical user interfaces for SAS analytical methods
- Collaborated with several departments to ensure software met customer needs

MaxPoint Interactive, Inc., Morrisville, NC

Data Scientist Intern

May 2016 – August 2016

- Researched & implemented methods to model client sales data
- Improved predictive accuracy by 40% on average

NC State University College of Veterinary Medicine, Raleigh, NC

Statistical Consultant

August 2014 – August 2015

- Employed various statistical methods to answer research questions
- Experimental design, power analyses, and applied statistical modeling

Federal Reserve Bank of Richmond, Richmond, VA*Research Associate (Research)*

July 2010 - August 2011

- Supplied research assistance to staff economists
- Aided in preparation of memos for policy meetings

Research Associate (National Economic Conditions)

July 2007 - July 2010

- Briefed economists on recent macroeconomic data
- Provided research support for President Jeffrey Lacker

PROFESSIONAL ACTIVITIES & SERVICE

NC Chapter of the American Statistical Association (NC ASA), Raleigh, NC*Treasurer*

November 2018 – January 2020

Industry Interests Group Core Strategic Team

January 2018 – Present

Organizer, Career Information Fair

August 2018 – April 2019

NC State University Statistics Department, Raleigh, NC*Department Head Search Committee*

May 2016 – August 2017

Visit Day Organizer

January 2015 – March 2015

Stat Buddy Mentor

June 2012 – May 2013, June 2014 – May 2014

NCSU Statistical Learning Group (SLG), Raleigh, NC*Founder & Organizer*

July 2014 – May 2015

Department Graduate Student Association (GSA), Raleigh, NC*President*

May 2013 – May 2014

Member, Beach Trip Committee

June 2013 – September 2013

AWARDS

NC ASA Chapter Service Award

December 2020

2nd place, NC State University Graduate Research Symposium

March 2017

University GSA Recognition for Excellence in Classroom Teaching

March 2017

Francis G. Giesbrecht Award for Statistical Consulting

April 2015

Gertrude M. Cox Achievement Award (best prelim exam)

April 2014

Department Outstanding Teaching Assistant

April 2014

University GSA Outstanding Teaching Assistant

March 2014

Elected to Mu Sigma Rho (statistics honor society)

March 2013

STEM Supplemental Fellowship

August 2011 - May 2012

COMPUTING EXPERIENCE

SAS, SAS Viya, MATLAB, R, LaTeX, Linux, Git, XML, Apache Velocity, Julia, Python, Microsoft Office

RESEARCH INTERESTS

Machine learning, big and high-dimensional data, computational statistics, statistics education

PUBLICATIONS

Chi, E., **Gaines, B.**, et al. (2020). "Provable Convex Co-clustering of Tensors." *Journal of Machine Learning Research*, 21(214), 1-58.

Gaines, B. (2020). "Tips for Writing Custom SAS® Studio Tasks That Use CAS Actions for Advanced Analytics." In *Proceedings of the SAS Global Forum 2020 Conference*. Cary, NC: SAS Institute Inc.

Gaines, B. (2019). "Learning Data Science with SAS® University Edition and JupyterLab." In *Proceedings of the SAS Global Forum 2019 Conference*. Cary, NC: SAS Institute Inc.

Parkinson, L., **Gaines, B.**, and Nollens, H. (2019). "Effect of Nutrient Enema on Serum Nutrient Concentrations in White-Spotted Bamboo Sharks (*Chiloscyllium Plagiosum*)," *Journal of Zoo and Wildlife Medicine*, 50(1), 55-61.

Gaines, B., Kim, J., and Zhou, H. (2018). "Algorithms for Fitting the Constrained Lasso." *Journal of Computational and Graphical Statistics*, 27(4), 861-871.

Jarrett, M., Bailey, K., Messenger, K., Prange, T., **Gaines, B.**, and Posner, L. (2018). "Recovery of Horses from General Anesthesia After Induction with Propofol and Ketamine Versus Midazolam and Ketamine," *Journal of the American Veterinary Medical Association*, 253(1), 101-107.

Balko, J., Wilson, S., Lewbart, G., **Gaines, B.**, and Posner, L. (2017). "Propofol as an Immersion Anesthetic and in a Minimum Anesthetic Concentration (MAC) Reduction Model In Goldfish (*Carassius Auratus*)," *Journal of Zoo and Wildlife Medicine*, 48(1), 48-54.

Muller, C., **Gaines, B.**, et al. (2016). "Evaluation of Clinical Metrology Instrument in Dogs with Osteoarthritis." *Journal of Veterinary Internal Medicine*, 30(3), 836-846.

Jarque, A., and **Gaines, B.** (2012). "Regulation and the Composition of CEO Pay." *Federal Reserve Bank of Richmond Economic Quarterly*, 98(4), 309-348.