

Brian R. Gaines

brgaines@ncsu.edu

<http://brgaines.github.io>

EDUCATION

North Carolina State University, Raleigh, NC

Doctor of Philosophy, Statistics

May 2017 (Expected)

Master of Statistics, Mathematical Statistics Concentration

August 2014

- GPA: 3.8/4.0
- Passed qualifier at Ph.D. level
- Passed Ph.D. written prelim exam

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

ACADEMIC EXPERIENCE

North Carolina State University, Raleigh, NC

Teaching Assistant

Aug. 2011 – May 2014, Aug. 2015 – May 2016, Aug. 2016 - Present

- ST512 – Experimental Statistics For Biological Sciences II
- ST372 – Introduction to Statistical Inference and Regression
- ST311 – Introduction to Statistics
- ST350 – Economics & Business Statistics

Lecturer, ST311

May 2014 – Aug. 2014, June 2015 – Aug. 2015

Guest Lecturer, ST512

November 2012, March 2015

University of Richmond, Richmond, VA

Guest Lecturer, ECON 200 – Money & Banking

January 2011

WORK EXPERIENCE

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

May 2016 - Present

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*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

Statistics in the Community (STATCOM), Raleigh, NC*Member, Executive Committee*

November 2012 – November 2013

AWARDS

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

R, MATLAB, SAS, LaTeX, Linux, Git, Julia, Python, SQL, Microsoft Office, Stata

RESEARCH INTERESTS

Machine learning, big and high-dimensional data, computational statistics, Bayesian methods

PUBLICATIONS

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*, forthcoming.

Gaines, B., and Zhou, H. (2016). "Algorithms for Fitting the Constrained Lasso," submitted.

Jarrett, M., Bailey, K., Messenger, K., Prange, T., **Gaines, B.**, and Posner, L. (2016). "Recovery of Horses from General Anesthesia Following Induction with Either Propofol or Midazolam Followed by Ketamine," *Journal of the American Veterinary Medical Association*, forthcoming.

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.