

# Brian R. Gaines

Brian.Gaines@sas.com

<http://brgaines.github.io>

## EDUCATION

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### **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

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### **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

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### **SAS**, Cary, NC

*Research Statistician Developer*

August 2017 – Present

- Research, design, & develop graphical user interfaces for SAS analytical methods
- Collaborate with several departments to ensure software meets 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

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PROFESSIONAL ACTIVITIES & SERVICE

**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

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AWARDS

|  |                        |
|--|------------------------|
| 2 <sup>nd</sup> 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 |

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COMPUTING EXPERIENCE

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

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RESEARCH INTERESTS

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

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PUBLICATIONS

**Gaines, B.**, Kim, J., and Zhou, H. (2018). "Algorithms for Fitting the Constrained Lasso," under revision.

Parkinson, L., Thomas, P., **Gaines, B.**, and Nollens, H. (2018). "Metabolic State of White-Spotted Bamboo Sharks (*Chiloscyllium plagiosum*) Following Nutrient Enemas," submitted.

Jarrett, M., Bailey, K., Messenger, K., Prange, T., **Gaines, B.**, and Posner, L. (2018). "Recovery of Horses from General Anesthesia Following Induction with Either Propofol or Midazolam Followed by Ketamine," *Journal of the American Veterinary Medical Association*, forthcoming.

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.