

# Justin B. Post, Ph.D.

NC State Department of Statistics  
2311 Stinson Drive  
Raleigh, NC 27695-8203

E-mail: [jbpost2@ncsu.edu](mailto:jbpost2@ncsu.edu)  
Phone: 919-515-0637  
Web: [jbpost2.github.io](http://jbpost2.github.io)  
Github: [jbpost2](https://github.com/jbpost2)

## Education

---

### Ph.D., Statistics

- North Carolina State University, Raleigh, NC
- Title: *Methods to Improve Prediction Accuracy Using Structural Constraints*
- Advisor: Howard D. Bondell
- Research interests: Statistics Education, Online Education, Adaptive Learning, Statistics in Sports, Data Science, Quantitative Literacy

### Master of Statistics

- North Carolina State University. Raleigh, NC
- Concentration in Biomedical Statistics

### Bachelor of Science in Mathematics

- Penn State Erie, The Behrend College. Erie, PA
- Minor in Statistics

## Professional Positions

---

8/2024 – present	<b>Teaching Professor</b> at North Carolina State University
6/2018 – present	<b>Director of Online Education</b>
3/2023 – present	<b>Research Consultant</b> , Criminal Justice Institute, University of North Carolina - Chapel Hill
8/2018 – 7/2024	<b>Teaching Associate Professor</b> at North Carolina State University
8/2013 – 7/2018	<b>Teaching Assistant Professor</b> at North Carolina State University
5/2015 – 5/2018	<b>Director of Undergraduate Research</b>
8/2012 – 5/2013	<b>Assistant Professor</b> at the University of Mount Union
5/2013 – 8/2013, 5/2012 – 8/2012	<b>Adjunct Instructor</b> at North Carolina State University
7/2010 – 6/2012	<b>Statistical Consultant</b> to the College of Agriculture and Life Sciences at North Carolina State University
8/2007 – 5/2010	<b>Teaching Assistant</b> at North Carolina State University

## Director of Online Education Responsibilities

---

**Position goals:** Improve and develop our online master of statistics and graduate certificate in applied statistics and data management programs. Provide guidance for other online/hybrid course offerings.

### Online master's and certificate programs

- Program direction
  - Created goals for master's and certificate programs
  - Assessment of programs and student outcomes
  - Plan course offerings and update curriculum
- Advise current and potential students
- Developed student support and bridge materials
  - Online program orientation sessions
  - Created open programming courses
  - Hold sessions on useful/interesting topics (git/github, using the CLI, latex, makefiles, etc.)
- Program advertisement and recruitment
  - Created and maintain online program websites
  - Write current student, alumni, and faculty spotlight articles
  - Established a virtual graduate program information session with in-person program director
  - Monitor google ad activity and keywords
- Networking
  - Coordination of networking events and social media groups
  - Hosting of research round robin (PhD and master's programs)
- Admissions for online master's program

### Recording studio

- Created lightboard and lecture recording space
- Developed training materials and best practices for faculty and teaching assistant use

### Coordination of Large Introductory Courses

- ST 311 – Introduction to Statistics (direct oversight one semester)
- ST 307 – Introduction to Statistical Programming – R
- ST 308 – Introduction to Statistical Programming – SAS
  - Approximately 800-1000 students per semester in each of ST 311 and ST 307/308
  - Provide training to in-person and hybrid teaching assistant instructors
  - Development and updating of course materials

## Teaching & Curriculum Activity

---

### Traditional (face-to-face) Course Development

- Created ST 501 and ST 502 (Fundamentals of Statistical Inference I & II)
  - o Statistics master's degree core courses also serving financial mathematics students and graduate students interested in a PhD minor in statistics.
  - o Modern treatment of theory with simulation (via the R software) used throughout to enhance understanding and intuition
  - o Created interactive applications to allow students to investigate topics visually
  - o Students implement simulation studies to investigate competing confidence interval and hypothesis testing methods

### Hybrid (or flipped) Course Development

- Created ST 308 – Introduction to Statistical Programming – R (one credit)
- Transformed ST 307 – Introduction to Statistical Programming – SAS (one credit)
  - o Both courses are required for statistics majors/minors and students from the College of Management
  - o Interactive videos used as the lecture component with short follow up quizzes
  - o I lead and train a team of teaching assistants that facilitate the hands-on in-person programming activities

### Online Course Development

- Created ST 558 - Data Science for Statisticians (R based)
  - o Statistics master's elective and graduate certificate course
  - o Deep dive into the use of R, R Markdown, the tidyverse, good programming practices, and the creation of dashboards via R Shiny
  - o Survey of common machine learning methods, creation of APIs, and use of containers (via docker)
  - o Comprehensive projects used to build a portfolio on github
  - o Obtained Quality Matters certification of the course in Summer 2020
- Created ST 554 (pending course approval, ST 590) – Analysis of Big Data (python based)
  - o Statistics master's elective and graduate certificate course
  - o Deep dive into the use of python (along with commonly used packages such as pandas, numpy, and scikit-learn), jupyter lab, and good programming practices
  - o Use of spark (via pyspark) to handle, summarize, and model big data via pipelines
- Developed ST 513 and ST 514 (Statistics for Management and Social Sciences I & II)
  - o Core sequence for our graduate certificate in Applied Statistics and Data Management
  - o Hands-on statistical method sequence with use of software (SAS) throughout
  - o Project based assessments and reports to hone student skills

## Open Online Course Development

- [Created Basics of R course](#)
- [Created Basics of SAS course](#)
  - o Designed to support our graduate students and faculty by providing basic training in R or SAS
  - o Full course with quizzes and assignments available
- See “Other Teaching” for additional open course materials

## Courses Taught at NC State

---

- ST 307 - Introduction to Statistical Programming - SAS
- ST 308 - Introduction to Statistical Programming - R
- ST 311 - Introduction to Statistics
- ST 370 - Probability and Statistics for Engineers
- ST 372 - Introduction to Statistical Inference and Regression
- ST 421 - Introduction to Mathematical Statistics I
- ST 422 - Introduction to Mathematical Statistics II
- ST 498 - Honors Research Project
- ST 501 - Fundamentals of Statistical Inference I
- ST 502 - Fundamentals of Statistical Inference II
- ST 511 - Statistics Methods for Researchers I
- ST 512 - Statistics Methods for Researchers II
- ST 513 - Statistics for Management and Social Sciences I
- ST 521 - Statistical Theory I
- ST 554 - Analysis of Big Data
- ST 555 - Statistical Programming I
- ST 558 - Data Science for Statisticians

## Other Teaching Activity

---

**Data Matters** (Yearly data science courses put on by the Odum Institute, 2016-2023)

- [Basics of R for Data Science and Statistics](#)
- [Improving R Programming](#)
- [R for Automating Workflow and Sharing Work](#)

**DATAWorks** workshops

- [Using R Markdown & the Tidyverse to Create Reproducible Research](#) (2022)
- Introduction to R (2018)

**Cary Academy (High School) guest lectures:**

- 2023 lectures: Six lectures about statistical modeling & inference including multiple linear regression and logistic regression. Students applied ideas to an actuarial competition
- 2021 lectures: Six lectures relating optimization, mathematical statistics, and machine learning. Students applied ideas to a Kaggle competition

**United States Conference on Teaching Statistics workshops:**

- [Teaching With R](#) (2021)
- Creating R shiny Applications (with Dr. Herle McGowan, 2017)

**NC State Executive Education programs:**

- Infosys Data Science Program (2019-2020)
  - o Calculus for Data Science
  - o Statistical Thinking
- Cisco Foundations of Data Science Courses (2016-2018)
  - o Multivariate Calculus for Data Science
  - o Probability Overview
  - o Statistics Overview

**Director of Undergraduate Education Roles**

---

**Position goal:** Get every student in the undergraduate program involved in an undergraduate research project or internship at least once during their time at NCSU

- Worked with statistics faculty to develop syllabi and expectations for projects suitable to undergraduates and language for inclusion of funding for projects in grant proposals. Projects needed to include
  - o Application of methods to real data
  - o Statistical programming
  - o Write-up and presentation of analysis and results to both technical and non-technical audiences
  - o Interactive application or striking visualization
  - o Reflection on work completed and its relation to coursework and future plans
- Provided student support via
  - o Advertisement of opportunities and matching of skillsets to projects
  - o Mentoring and help through weekly group work meetings
  - o Monthly group discussions and practice presentations

**Awards, Nominations, & Certifications**

---

2023-current	Co-PI, Modules for Statistics Graduate Teaching Assistants Learning to Teach Equitably with Authentic Data (GTAs-LEAD) (NSF: IUUSE \$400,000)
2023-2024	SoTL Institute Scholar (NC State: OFE \$1500)
2023-2024	Course Quality Program Faculty Lead (NC State: DELTA \$5000)
2023	RED Inclusive Teaching Certification
2023	Quality Matters Peer Reviewer Certification
2023	Two “Thank an Advisor” awards
2023	Graduate School Outstanding Graduate Faculty Mentor Award Nominee

2022-2023	Course Quality Program Faculty Lead (NC State: DELTA \$5000)
2022	North Carolina Education Datathon (member of winning team) (\$2000)
2021	Gertrude Cox Gertrude Cox Award for Innovative Excellence in Teaching and Learning with Technology Nominee
2021	Michael Dickey Outstanding Research Mentor Award Nominee
2013-2021	Sixteen "Thank a teacher" awards
2019-2020	D.D. Mason Award (Distinction to the statistics department through teaching, research, or service)
2020	ST 513/514 course redesign (Statistics Department \$10,000)
2020	Online Course Improvement Program Grant (NC State: DELTA \$4,000)
2020	STEM Education Initiative Grant (NC State: Provost's Office \$20,000)
2018-2020	Quantitative Literacy Champion (NC State: DASA \$1,500/semester)
2019	Moodle Educator Certification
2019	Quality Matters APPQMR Certification
2019	Open Textbook Grant (NC State: Libraries \$1,500)
2018, 2019	DELTA Faculty Fellows (NC State: DELTA \$10,000)
2019	Certificate of Reflective Teaching Award
2018	Graduate student recruitment grant (NC State: Graduate School \$1,400)
2018	Critical Path Redesign grant: renewal (NC State: DELTA \$9,000)
2017	Critical Path Redesign grant (NC State: DELTA \$24,000)
2017	Alumni Outstanding Teaching Award Recipient
2017	Outstanding Teaching Award Recipient
2013-2014	Interdisciplinary Liaisons Initiative Award (NC State: CHASS \$1,000)
2010-2011	Gertrude M. Cox Academic Achievement Award Fellow (Outstanding Ph.D. Candidate)
2010-2011	Francis G. Giesbrecht Award (For excellence in Statistical Consulting)
2010-2011	Paige Plagge Graduate Award for Citizenship (Services to the department and students)

## Other Scholarly Activity

---

### Papers

- Spencer, D., Griffith, E., Briska, K., Post, J., Willis, C.. (2023) The Role of Non-cognitive Factors in the Introductory Statistics Classroom. *Statistics Education Research Journal*.
- Lin, T., Shah, Sanjay B., Wang-Li, L. Oviedo-Rondon, Edgar O., Post, J.. (2016), Development of MOS sensor-based NH<sub>3</sub> monitor for use in poultry houses. *Computers and Electronics in Agriculture*, 127: 708-715.
- McCormick, M., Grand, L., Post, J., and Cubeta, M.. (2013), Phylogenetic relatedness and phenotypic characterization of *Fomes fasciatus* and *Fomes fomentarius* sampled from the United States. *Mycologia*, 105, no 6: 1524-1534.

- Post, J. B. and Bondell, H. D. (2013), Factor Selection and Structural Identification in the Interaction ANOVA Model. *Biometrics*, 69: 70–79. doi: 10.1111/j.1541-0420.2012.01810.x

### **Posters**

- Introductory Data Science Course Project: Retrieving data from an API and conducting an EDA, Justin Post. 2023 United States Conference on Teaching Statistics.
- Teaching and Student Exploration of Convergence Concepts Using Interactive Shiny Applications, Xiaoxia Champon, Justin Post. 2023 United States Conference on Teaching Statistics.
- Connecting to an API and Creating a Word Cloud in R, Justin Post. 2021 United States Conference on Teaching Statistics.
- Using Visuals to Improve Quantitative Literacy Outcomes in Principles of Genetics (GN 311), Justin Post. 2021 NC State Teaching and Learning Symposium.
- Case-Study Based Redesign of a Large Introductory Course for Non-Majors, Justin Post, Jonathan Duggins. 2018 Electronic Conference on Teaching Statistics.
- Scheduling Effects in the NBA and NHL, Jason A. Osborne, Justin Post. 2018 North Carolina American Statistical Association Recycled Poster Event, Hillsborough, NC.
- Scheduling Effects in the NBA and NHL, Jason A. Osborne, Justin Post. 2017 New England Symposium on Statistics in Sports, Harvard University, Cambridge, MA.
- Interactive Math Stat Visualizations Using R Shiny, Justin Post. 2016 Electronic Conference on Teaching Statistics.
- Modelling Umpire Misclassification of Balls and Strikes using PitchFX Data, Justin Post, Jason A. Osborne. 2013 New England Symposium on Statistics in Sports, Harvard University, Cambridge, MA.

### **Talks, Webinars, & Non-peer reviewed articles**

- Using Generative AI to Supplement Learning in Statistical Programming Courses (Invited Session), Justin Post. 2024 Joint Statistical Meetings, Portland, OR. (Talk)
- Authentic Data Explorations: Investigating the Normal Distribution through Comparative Rent Data (Speed Session), Maria Cruciani, Justin Post, Jennifer Green, Sunghwan Byun. 2024 Joint Statistical Meetings, Portland, OR. (Co-author)
- GTAs' Problems of Practice for Teaching Introductory Statistics Courses (Topic-Contributed Paper Session), Sunghwan Byun, Jennifer Green, Justin Post, Maria Cruciani, Matthew Ferrell. 2024 Joint Statistical Meetings, Portland, OR. (Co-author)
- AI Chatbots & Statistics/Data Science Education, Justin Post, Matthew Beckman. 2023 United States Conference on Teaching Statistics. (Birds of a Feather Discussion)
- ChatGPT – Adapt, Embrace, or Reject. 2023 NC State Conference on Faculty Excellence (Roundtable organizer and participant)
- Statistics: Worlds of Opportunities. 2023 Pine Springs Preparatory Academy (Project-Based Learning Expert Talk)
- Early Adopters of Moodle 4 Share Experiences. 2022 North Carolina State University, DELTA article (Discussant)
- Talking Quantitative Data Through Discussion Boards. Justin Post. 2020 North Carolina State University, Provost's newsletter, Pack hacks for Faculty. (Article)

- Creating a hands-on data exploration activity for your students - no programming required! Justin Post. 2020 North Carolina State University, Office of Faculty Development and Division of Academic and Student Affairs (Webinar).
- Championing General Education: A Model for Faculty Engagement in the General Education Assessment Process. Stephany Dunston, Samantha Rich, Justin Post. 2019 UNC System Student Success Conference. (Talk)
- Teaching Statements. 2019 North Carolina State University, Academic Packways (Discussant)
- Flip Forward into the Pool of Student Engagement, Justin Post, Christopher Beeson. 2018, 2019 North Carolina State University. (Workshop given twice)
- Friday Live: Discussions on Teaching with Technology – Understanding how and why to flip a course. Justin Post. 2019 North Carolina State University, DELTA Friday webinar. (Webinar)
- Investing in Your Students: How to build a great TA Partnership. 2019 North Carolina State University, DELTA (Panel Member)
- Blended Learning, Bethany Smith, Justin Post. 2018 North Carolina State University. (Webinar)
- Sports and Statistics at NC State, Justin Post, Nick Kapur. 2018 Chancellor’s Visit, 2018 North Carolina State University. (Talk)
- Implementing a Department-wide Undergraduate Research Program, Justin Post. 2018 Joint Statistical Meetings, Vancouver, WA. (Talk)
- Integrating Programming into Statistics Curricula, Jonathan Duggins, Justin Post. 2018 Electronic Conference on Teaching Statistics. (Birds of a feather discussion)
- Discussing the Uses and Creation of R Shiny Applications, Justin Post. 2017 Joint Statistical Meetings, Baltimore, MD. (Roundtable)
- Increasing Undergraduate Student Knowledge and Interest Using a Sports Stats Club (Invited Session), Justin Post. 2015 Joint Statistical Meetings, Seattle, WA. (Talk)
- NFL Play Predictions, Will Burton and Michael Dickey (Adviser). 2015 Joint Statistical Meetings, Seattle, WA. (Speed session)
- Using NFL Draft Metrics to Predict Player Success, James Gilman, Nick Kapur, Justin Post. 2014 Joint Statistical Meetings, Boston, MA. (Talk)
- Effect of Shot Location Trends on Offensive Efficiency in the NBA, Michael Dickey, Justin Post. 2014 Joint Statistical Meetings, Boston, MA. (Speed Session)

### **Engagement & Activities with Professional Associations**

- Joint Statistical Meetings
  - o 2018 - Topic Contributed Session Organizer - Statistics Education
  - o 2015 - Invited Session Organizer - Sports Data in Statistics Education
  - o 2014 - Topic Contributed Session Chair - Sports Section Speed Session
- Ohio Spring Regional MAA Meetings
  - o 2013 - Session Chair
- National Center for Faculty Development & Diversity member
  - o 2016-2020
- American Statistical Association Sponsored Data Fest at Duke University
  - o 2015, 2017 Judge
  - o 2016 VIP Consultant



## North Carolina State University Related Service

---

2024 – present	(Chair) Master’s and Graduate Certificate Curriculum Committee
2017 – present	Teaching Mentor to Statistics Faculty
2019 – 2024	Statistics Department Curriculum Committee
2020 – 2024	Statistics Department Research Round Robin Host
2024	Lecturer Search Committee Chair
2023	Lecturer Search Committee Chair
2017 – 2023	GLBT Advocate
2018 – 2021	Quant Literacy Champion: Division of Academic and Student Affairs
2020	Faculty Advisor to Deep Learning with R group
2018 – 2020	DELTA Faculty Fellow
2017 – 2020	Pack Promise Mentor (First Generation College Students)
2017 – 2020	Goodnight scholar mentor
2016 - 2017	JUNTOS program development of reporting and database systems
2013 – 2018	Faculty Advisor to Sports Analytics Club
2014 – 2017	Faculty Advisor to Statistical Learning Group

## Other Service Areas

---

2015 – 2018, 2022 – present	Stat’n’Chat Organizer (Local Stat-Ed Group)
2023 – present	Reviewer, Journal of Statistics and Data Science Education
2021, 2023	Guest Lecturer, Cary Academy
2023	Project-Based Learning Expert, Pine Springs Preparatory Academy
2015, 2017	Data Fest Judge
2016	Data Fest VIP Consultant