Elijah Meyer
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Currently a professional track teaching assistant professor at North Carolina State University.

Education

Duke University   Durham, NC
Postdoctoral Associate   August 2022 - August 2024
Advisor: Dr. Mine Çetinkaya-Rundel

Montana State University   Bozeman, MT
PhD Statistics with a focus in Education   August 2018 - July 2022
Advisor: Dr. Jennifer Green & Dr. Stacey Hancock

Montana State University   Bozeman, MT
MS Statistics   January 2015 - May 2018
Advisor: Dr. Jennifer Green

Montana State University   Bozeman, MT
BS Statistics   August 2011 - Dec 2015

Focus

− Aim to provide a more holistic understanding about statistics and data science instruction, specifically as it relates to recommended active learning techniques and newer instructors.

− Current work targets a better understanding of students' interactions with AI, the development of a data-driven framework to strengthen collaboration between schools and community partners to improve school safety, climate, and behavioral health outcomes, and a variety of course development projects.

− Additional work targets the creation of a flexible blueprint for instructors to navigate curricular, pedagogical, and computational challenges when designing or modernizing an introductory data science course; mentoring an undergraduate student through the creation of dynamic shiny application to help better the teachings and learnings of data science; mentoring masters and PhD students through their respective research.

Teaching

North Carolina State University

- Statistical Methods For Researchers I (ST 511): Fall 2024; Fall 2025

- Introduction to Statistics II (ST312): Fall 2025

- Data Science for Statisticians (ST 558): Summer 2025

- Introduction to Foundations of Data Science with R (ST 295): Spring 2025

- Course Coordinator of Introduction to SAS and Introduction to R (ST 307 & ST 308): Spring 2025; Summer 2025; Fall 2025

Duke University
Introduction to Data Science and Statistical Thinking: Fall 2022, Spring 2023, Summer 2023, Fall 2023

Montana State University
Over 8 years experience as the lead instructor for Introduction to Statistics & Intermediate Statistics with R.

Experience

Project COMPASS
Collaboration   Fall 2025 - Present

- I am the lead statistician on Project COMPASS (Community Partnership and Assessment for School Safety). This is a three-year, federally funded initiative focused on developing and piloting a data-driven framework to strengthen collaboration between schools and community partners, including behavioral health providers, law enforcement, and nonprofits, to improve school safety, climate, and behavioral health outcomes. The project brings together NC State, USF, and Sam Houston State University to create and test practical tools that help schools: Assess existing safety and prevention systems; Identify service and coordination gaps; Use data to guide actionable improvement plans.

NC State University: Introduction to Foundations of Data Science with R

Course creator + instructor   Spring 2025; Spring 2026

- Created and instructed the first introductory data science course at NC State university open to all students, regardless of coding background. Software include GitHub, Quarto, R, and RStudio. Topics include data wrangling, data tidying, exploratory data analysis (including working with time series and qualitative data), linear regression, logistic regression, and model evaluation (including testing + training data).

NC State University: Introduction to SAS and R

Course coordinator   Fall 2025 | Present

- Design and facilitate lessons around different pedagogical practices with coding to a team of graduate student instructors (6 per semester). These instructors then teach the material to roughly 800 students a semester.

- Redesigning and modernizing the course structure / content.

- Mentor graduate students on pedagogical practices to support their teachings.

NC State University: Research Advisory Committees

Mentor   Fall 2025 | Present

- Helping facilitate master's student research, investigating species richness and species detection in western North Carolina.

- Helping facilitate student's PhD research, investigating performance and efficiency of different liquid metal webs.

Park Scholar Mentor

Mentor   Spring 2025 | Present

- Worked with one student, having discussions around research, development of grant proposals, conferences, and internships.

- Have targeted conversations around opportunities for research, and postgraduate plans.

Duke University: Introduction to Data Science and Statistical Thinking

Postdoctoral Associate Instructor   Aug 2022 | Aug 2024

- Taught two sections of Introduction to Data Science and Statistical Thinking in-person with class sizes from 150-179 students using the data science in a box curricula. Facilitated collaborative learning environment for students to learn GitHub, Quarto, and RStudio, who often have little to no statistics, data science, or coding experience when first entering the class. Lead weekly meetings, supervised, and helped prepare 10-13 teaching assistants (undergraduate, master's and Ph.D. level assistants) for their assigned roles These roles included grading, holding office hours, and facilitating weekly labs.

- Taught one section of Introduction to Data Science and Statistical Thinking in-person during a six-week Summer session with a class size of 15 students. Developed and organized a topic schedule for the Summer course. Supervised and helped prepare one teaching assistant throughout the session by creating and discussing material that would be used for lab.

Coursera Course Creation

Developer   2023 | 2025

- Currently working with Dr. Mine Çetinkaya-Rundel on creating a multi-module data science course that to be hosted on Coursera. Upon completion, participants will earn a professional certificate of introductory level data science. Topics include data wrangling and munging, exploratory data analysis, predictive modeling, and data visualization, and effective communication of results.

Undergraduate Research Mentor

Mentoring   2023 | Present

- Co-mentored undergraduate student through the writing and presentation of their undergraduate thesis research. Helped organize, facilitate, and lead weekly meetings with student to discuss research, writing, and presentation strategies

- Currently working side-by-side with an undergraduate student to create a dynamic interactive shiny application in R to better students' understanding of statistics and data science. Leading weekly to meetings to discuss and help facilitate the creation of R shiny application. Conversations have strong emphasis on research concepts such as practical importance and utility of research during the mentoring process.

Data Fest
Organizer 2023 | Present

- Currently serve as an organizer for Data Fest at NC State University.

- Helped organize and facilitate Data Fest at Duke University 2023. This included contacting other potential participating universities, leading activities during Data Fest, and answering questions groups of students had while participating in the competition.

- Served as a judge for Data Fest at Duke University.

Introductory and Intermediate Statistics
Graduate Teaching Assistant - Lead Instructor Jan 2013 | 2021

- Taught 11 sections of Introductory Statistics both in-person and online. Facilitated collaborative learning environment using a technology enhanced active learning classroom while supervising an undergraduate assistant and managing 20 - 60 students in class.

- Taught seven sections of Intermediate Statistics both in-person and online. Developed course materials in collaboration with other graduate teaching assistants. Held live online coding sessions to allow students to learn by doing and receive immediate feedback in the online setting.

Introductory Statistics with R Curriculum
Developer 2020

- Collaborated on the reform of the Introductory Statistics curriculum at Montana State University. Played an integral role in incorporating the use of R and RStudio. Emphasized the importance of statistical literacy and statistical reasoning through the development of case study assignments that have students explore and connect ideas through published literature.

RStudio Data Science Workshops
September 2019 | March 2020
Instructor

- Helped create, modify, and instruct content. Ran a series of four R-workshops for undergraduates, graduate students, and faculty at Montana State University. Lead instructor for the workshops: Introduction to R; Intermediate R; Data Visualization; Data Wrangling.

Statistical Consulting and Research Services (SCRS)
Graduate Research Assistant September 2019 | May 2020

- Provided high-quality statistical and research consulting and collaboration.

- Assisted researchers in the entire research process: study design and methodology, alignment of research questions with statistical analysis, data visualization, analysis and modeling, interpretation and dissemination of results.

Graduate Statistical Methods for Data Analysis II
September 2019 | December 2019
Teaching Assistant

- Collaborated with the instructor on the creation of weekly labs for students. Helped facilitate instruction of weekly labs to groups of students.

Online Intermediate Statistics with R
Summer 2019
Developer & Lead Instructor

- Developed and implemented the first online version of Intermediate Statistics with R at Montana State University. Incorporated the use of WebEx, R and RStudio to communicate statistical procedures and concepts to 20 students over the course of 8 weeks. Implemented novel instructional strategies into the course, including the facilitation of online group discussions and the use of New York Times: What's Going On in This Graph? to build students' experiences with real data and emphasize the creativity in data visualization.

Excellence in Teaching Symposium: Teaching Assistant Training   2017 | 2018
Graduate Student Leader

- Collaboratively redesigned and led year-long teaching program for new graduate students.

- Organized and executed weekly hour-long teaching symposiums, such as Responding to Student Contributions in the Classroom

- Mentored new graduate students on how to effectively communicate mathematical and statistical concepts to diverse learners.

Duke Statistical Science Head Teaching Assistant Training   2023
Creator + Instructor

- Collaboratively redesigned and updated training preparation materials for teaching assistants in leadership positions in the statistical sciences department at Duke. Co-lead training meeting to prepare teaching assistants on their administrative and teaching responsibilities.

Introduction to Undergraduate Research in Statistics Workshop   2024
Mentor

- Mentored a team of five students in an online setting who have no experience in independent research through a two-week workshop that included the re-creation and advancement of a real case-study; a formal report; and a presentation on their findings.

- Worked specifically to help improve students' communication, writing, critical thinking, and research skills.

PUBLICATIONS

Meyer, E., & Çetinkaya-Rundel, M. (2025). A Blueprint to Design Curriculum and Pedagogy for Introductory Data Science. arXiv preprint arXiv:2508.03952. https://doi.org/10.48550/arXiv.2508.03952

Rubin, N., Tackett, M., Çetinkaya-Rundel, & Meyer, E. (2025) https://cgscholar.com/bookstore/works/evaluating-student-perceptions-of-assessment-in-introductory-quantitative-studies. The International Journal of Assessment and Evaluation, 32 (1).

Meyer, E., Green, J., Arnold, L., & Wickstrom, M. (2024). Understanding How and When Graduate Student Instructors Break through Challenges with Active Learning. International Journal of Research in Undergraduate Mathematics Education.

Meyer, E., & Çetinkaya-Rundel, M. Introductory Data Science: A Blueprint to Design Curriculum and Pedagogy. Submitted to the Journal of Statistics and Data Science Education.

Carnegie, N., Hancock, S., Meyer, E., Schmidt, J., & Yager, M. (2021). Montana State Introductory Statistics with R. Montana State University. Adapted from Çetinkaya-Rundel, M. & Hardin, J. (2021). Introduction to Modern Statistics. OpenIntro. https://openintro-ims.netlify.app/

Hammack, R., Gannon, P., Foreman, C., & Meyer, E. (2020). Impacts of professional development focused on teaching engineering applications of mathematics and science. School Science and Mathematics. 2020; 120: 413-424. https://doi.org/10.1111/ssm.12430

Cleaned data and performed statistical analysis to explore the impacts of a summer professional development program on in-service K-12 teachers'.

Meyer, E., Greenwood, M., & Tran, T. (2016). Statistical methods for detecting groups of patterns in daily step count activity profiles. Skyline: The Big Sky Undergraduate Journal, 4 (1). https://scholarworks.montana.edu/xmlui/handle/1/14924

Paper received a 2016 Skyline Journal Publication Contest Award. Used hierarchical clustering and related techniques to distinguish patterns in daily step count profiles for Fitbit data

Meyer, E., Greenwood, M., & Tran, T. (2016). Daily Step Count Profile Data for 61 Days [dataset]. Montana State University ScholarWorks. http://doi.org/10.15788/M2BC7C.

Yin A., Meyer, E., (in preparation) Bootstrap Exploration: R-Shiny Teaching Web Application on Bootstrapping and Randomization. To be submitted to the Journal of Statistics and Data Science Education.

Meyer, E., Green, J., Hildrith, L., Hancock, S., (in preparation) Motivation Matters: Developing an Instrument to Measure Newer Instructors' Situational Motivation to Use Active Learning in the Classroom When Teaching Statistics. To be submitted to the Journal of Statistics and Data Science Education.

AWARDS

LeRoy and Elva Martin Award for Excellence in Teaching Award (Nomination) 2025
Nominated for the LeRoy and Elva Martin by the Department of Statistics at NC State University. The award recognizes outstanding contributions to the College of Sciences' teaching mission, and is given to one tenure-track faculty, and one-professional track faculty member each year.
https : //sciences.ncsu.edu/intranet/college − of fices/deans − of fice/leroy − and − elva − martin − award − for − teaching − excellence

Teaching Excellence at Montana State University 2022
Competitive award given to one graduating student per department. This award honors students who have made a high impact on undergraduates' lives by helping them grow in knowledge, skill, and confidence.
https : //www.montana.edu/gradschool/excellence_awards.html

Dr. Gary G. Sackett Awards, Montana State University Department of Mathematical Sciences 2019 & 2021
Competitive award to financially support graduate student while conducting research **Outstanding**

Graduate Teaching Assistant Award, Montana State University College of Letters and Science 2020
Competitive award issued annually to two graduate teaching assistants within the Montana State University College of Letters and Sciences.
http : //www.montana.edu/lettersandscience/awards/awardmeyer.html

Outstanding Graduate Student Award, Montana State University Department of Mathematical Sciences 2019
Competitive award issued annually in recognition of academic excellence as a graduate student.

Student Research Travel Grant Award 2018
Competitive award issued to undergraduate and graduate students to present original research, papers, or posters at professional and academic conferences.

Outstanding Graduate Teaching Assistant Award, Montana State University Department of Mathematical Sciences 2017
Competitive award issued annually to graduate student instructors in the Department of Mathematical Sciences in recognition for superior teaching achievement.

Skyline Journal Publication Contest Award 2016
Recognition of outstanding scholarship in undergraduate research.

Member of Pi Mu Epsilon 2016
Inducted into national mathematics society.

CONFERENCE PRESENTATIONS

*Presenting authors

*Meyer, E. S., *Tackett, Maria. Teaching statistics and data science with R and GitHub. Invited workshop for useR conference at Duke University. Durham, NC. August, 2025.

*Meyer, E. S. Using Docker Containers in Teaching Statistics and Data Science: How NCShare Can Help. Part of breakout session at Moving NC Forward in Teaching Statistics and Data Science 2024 Regional Conference with Durso, J., McCahill, M. eCots. Raleigh, NC. June, 2024.

*Meyer, E. S. Teaching Quarto in Introductory Data Science. Topic-Contributed Paper Session at Joint Statistical Meetings (JSM) titled Teaching (with) Quarto, August, 2023. With Çetinkaya-Rundel, M., Bodwin, K., Rundel, C., and Tackett, M.

*Meyer, E. S. Students in Statistics Education. Session at Electronic Conference on Teaching Statistics, May 2022. With *Legacy, C., *Phadke, S., and *Rao, V.

*Meyer, E. S., Green, J. L., & Arnold, E. G. New perspectives on understanding graduate student instructors' longitudinal experiences with active learning. Refereed poster presentation at the United States Conference on Teaching Statistics (virtual), July, 2021.

*Meyer, E. S., Green, J. L., & Arnold, E. G. A longitudinal study of GTAs' experiences with active learning. Refereed poster presentation at the United States Conference on Teaching Statistics, State College, PA, May, 2019.

*Arnold, E. L., *Meyer, E. S., & *Green, J. L. Investigating future secondary mathematics teachers' development in statistics. Refereed virtual breakout session at United States Conference on Teaching Statistics, State College, PA, May, 2019.

*Meyer, E. S., & Green, J. L. Statistics behind the skill: Cluster analysis and data visualization on disc golf data. Refereed presentation at The Cascadia Symposium on Statistics in Sports, Vancouver, BC, August, 2018.

*Meyer, E. S., & Green, J. L. Statistics behind the skill: Cluster analysis and data visualization on disc golf data. Contributed poster presentation at the Joint Statistical Meetings, Vancouver, BC, July, 2018.
*Meyer, E. S., Green, J. L., & Arnold, E. G. Graduate teaching assistants' evolving conceptualizations of active learning. Refereed poster presentation at the Electronic Conference on Teaching Statistics, May, 2018. https://www.causeweb.org/cause/ecots/ecots18/posters/2-04
*Meyer, E. S., *Arnold, E. G., & *Green, J. L. Graduate teaching assistants' evolving conceptualizations of active learning. Refereed poster presentation at the Conference on Research in Undergraduate Mathematics Education, San Diego, CA, February, 2018.
*Green, J. L., Arnold, E. G., & Meyer, E. S. Enhancing instruction: Preparing graduate teaching assistants for active learning. Contributed presentation at the Joint Statistical Meetings, Baltimore, MD, July, 2017.

PROFESSIONAL DEVELOPMENT AND WORKSHOPS

STEM Storytellers Fellowship   September 2019 | May 2020
Engaged in a year-long National Science Foundation funded fellowship program to improve oral communication skills through improv techniques.

Teaching Online Program   September 2019 | December 2019
Completed optional course offered for faculty to support online teaching. Used information to develop the first online Intermediate Statistics course for Montana State University; learned and implemented best practices for teaching online.

TECHNICAL SKILLS

Programming Languages:	R, SAS
Operating Systems:	Mac OS, Windows

SERVICE

Undergraduate curriculum committee   2025 - present
Serve on a committee that is in the process of redesigning the undergraduate statistics curricula at NC State University.

Department engagement committee   2025 - present
Serve on a committee that helps plan and organize graduate-faculty trip to bolster community within the department

Data competition development   2024 - present
Co-developed, with UNC and Duke, a https://triangle-sports.github.io/

Park Scholars Mentor   2024 - present
Serve as a general Park Scholar mentor for the College of Sciences at NC State University

Journal Reviews: 2024 - present
Journal of Statistics and Data Science Education; Teaching Statistics; SAGE

Conference Reviews: 2025
USCOTS 2025 Posters & Beyond reviewer

Workshops   2024 - present
NC State Data Science Panel: Data Science: what's marketable and how to market

Presenting Research Results (Panelist)   2019
Served on panel that answered graduate students' questions about giving oral presentations.

Training Graduate Students in Statistics How to Teach Statistics, American Statistical Association 2018

Helped construct a list of resources that describe programs, courses, and materials others can use to help prepare graduate students to teach statistics.