

EDUCATION

Vanderbilt University

Ph.D. in Biostatistics, GPA: 4.00/4.00

Nashville, TN

Expected May 2029

Wake Forest University

M.S. in Statistics, GPA: 4.00/4.00

Graduate Certificate in Data Science, GPA: 4.00/4.00

Thesis Advisor: Sarah Lotspeich, Ph.D.

- Thesis: Adjusting for covariate misclassification to quantify the relationship between diabetes and local access to healthy food

Winston-Salem, NC

May 2024

University of Scranton

B.S. in Applied Mathematics and B.A. in Philosophy, *Summa Cum Laude*, GPA: 3.94/4.00

Minors in Computer Science and Finance, Concentration in Data Science

Honors Program, Special Jesuit Liberal Arts Honors Program

Thesis Advisor: Murong Xu, Ph.D.

- Thesis: Music Feature Classification: Using Techniques of Machine Learning to Detect Genre
- Available from <https://digitalservices.scranton.edu/digital/collection/p15111coll1/id/1340/rec/68>

Scranton, PA

May 2022

St. Anthony's High School

Advanced Regents Diploma

South Huntington, NY

June 2018

RESEARCH AND WORK EXPERIENCE

10. Research Assistant

Vanderbilt University Medical Center, Department of Biostatistics

Mentor: Rameela Raman, Ph.D.

Nashville, TN

July 2024 – Present

9. Lead Teaching Assistant

Wake Forest University, Departments of Statistical Sciences and Mathematics

Mentor: Lynne Yengulalp, Ph.D.

Winston-Salem, NC

Mar 2023 – May 2024

- Managed scheduling and logistics for over 70 teaching assistants and tutors
- Developed resources for pedagogical training and curriculum support

8. Research Assistant

Wake Forest University, Department of Statistical Sciences

Mentor: Sarah Lotspeich, Ph.D.

Winston-Salem, NC

Jan 2023 – May 2024

- Developed methods for error-prone data
- Contributed to ongoing lab projects and manuscripts

7. Data Science Intern

Hanesbrands

Winston-Salem, NC

June 2023 – August 2023

- Designed and implemented a scalable predictive sales model prototype
- Identified a multi-million dollar sales growth opportunity for a major account

- | | |
|---|--|
| <p>6. Academic Tutor
 <i>Self-Employed</i></p> <ul style="list-style-type: none"> • Supported students with mathematics and statistics coursework • Prepared students for standardized exams | <p>Huntington, NY
 January 2012 – Present</p> |
| <p>5. Summer Research Intern
 <i>Central Washington University, Department of Mathematics</i>
 Mentor: Sooie-Hoe Loke, Ph.D.</p> <ul style="list-style-type: none"> • Modeled a popular game show using R and Python • Communicated findings to peers and mentors using Beamer presentations • Attended workshops, talks, and lectures by field experts | <p>Virtual
 June 2021 – August 2021</p> |
| <p>4. Summer Research Intern
 <i>Carnegie Mellon University, Department of Statistics and Data Science</i>
 Mentors: Sam Ventura, Ph.D. and Ron Yurko, Ph.D.</p> <ul style="list-style-type: none"> • Worked on visualization and modeling projects in sports analytics using R • Attended workshops, talks, and lectures by field experts | <p>Virtual
 June 2020 – August 2020</p> |
| <p>3. Academic Tutor
 <i>University of Scranton, Center for Teaching and Learning Excellence</i></p> <ul style="list-style-type: none"> • Supported individual students with coursework in math, statistics, computing, logic • Reinforced classroom instruction for small groups of students on a drop-in basis | <p>Scranton, PA
 March 2019 – May 2022</p> |
| <p>2. Financial Analyst
 <i>VentureBrandUSA LLC</i></p> <ul style="list-style-type: none"> • Developed spreadsheet templates to model investment values over time | <p>East Northport, NY
 July 2019 – July 2021</p> |
| <p>1. Research Intern
 <i>Long Island University, Department of Biology</i>
 Mentors: Scott Santagata, Ph.D. and Paul Paino</p> <ul style="list-style-type: none"> • Quantified and compared biodiversity indices across the Scotia and Weddell Seas | <p>Brookville, NY
 March 2017 – August 2017</p> |

HONORS AND AWARDS

- | | |
|---|------------------|
| <p>16. SPAIG Award, American Statistical Association
 Given annually to recognize outstanding collaborations among academe, industry, and government organizations while recognizing key individual contributors</p> | <p>2025</p> |
| <p>15. Highly Commended Article, Significance Magazine
 Designation from the annual Statistical Excellence Award for Early-Career Writing Competition</p> | <p>2024</p> |
| <p>14. Russell G. Hamilton Scholar, Vanderbilt University</p> | <p>2024-2029</p> |
| <p>13. Provost's Graduate Fellowship, Vanderbilt University</p> | <p>2024-2029</p> |
| <p>12. Graduate Student Award for Outstanding Scholarship, Wake Forest University
 Awarded by the Department of Statistical Sciences for scholarship, ingenuity, and dedication</p> | <p>2024</p> |
| <p>11. Travel Award, Women in Statistics and Data Science Conference
 Merit-based award for student or early professional conference attendees</p> | <p>2023</p> |
| <p>10. Gertrude M Cox Scholarship, American Statistical Association
 Awarded for dedication to statistical inquiry, passion for mentoring, and extraordinary commitment to scholarly excellence</p> | <p>2023</p> |

- | | |
|---|-------------|
| 9. Teaching Assistantship, Wake Forest University
Full tuition grant and teaching stipend | 2022 – 2024 |
| 8. Provost Merit Scholarship, Wake Forest University
Merit-based graduate student award | 2022 – 2024 |
| 7. Outstanding Poster, Mathematical Association of America MathFest
Awarded for excellent project presentation and poster design | 2022 |
| 6. Excellence in Applied Mathematics Award, University of Scranton
Merit-based department award | 2022 |
| 5. Humanities Fellow, University of Scranton Slattery Center
Undergraduate humanities research grant | 2021 – 2022 |
| 4. Presidential Scholarship, University of Scranton
Merit-based full-tuition scholarship awarded for exemplary academic achievement | 2018 – 2022 |
| 3. Dean's List, University of Scranton
Distinction granted to full-time students with a GPA above 3.50 | 2018 – 2022 |
| 2. Central Convergence REU Scholar
Undergraduate research grant | 2021 |
| 1. National Hispanic Scholar, Hispanic Scholarship Fund
Merit-based distinction and scholarship awarded to university students of Hispanic heritage | 2018 – 2020 |

PEER-REVIEWED PUBLICATIONS

1. S.C. Lotspeich, **A.E. Mullan**, L. D'Agostino McGowan, and S.A. Hepler, "Combining straight-line and map-based distances to investigate the connection between proximity to healthy foods and disease," *Statistics in Medicine*, vol. 44, no. 7, pp. e70054, 2025. doi:10.1002/sim.70054.

SUBMITTED MANUSCRIPTS

1. **A.E. Mullan**, P.D.A. Nguyen, S.C. Lotspeich, "Linking Potentially Misclassified Healthy Food Access to Diabetes Prevalence," *Statistics and Public Policy* (under review), 2025+. Preprint: <https://arxiv.org/abs/2505.01465>

PRESENTATIONS

- | | |
|---|--------------------------------|
| 15. Guest Lecture: Statistics in Your Own Backyard
<i>Day of Discovery, Vanderbilt University</i> | Nashville, TN
May 2025 |
| 14. Contributed Poster: Visualizing Cost Effectiveness Analysis with Second-Generation Acceptability Curves - <i>ENAR Spring Meeting</i> | New Orleans, LA
March 2025 |
| 13. Guest Lecture: Statistical Ideas You Can Never Unsee
<i>PSYCH1130, Cornell University</i> | Ithaca, NY
March 2025 |
| 12. Invited Talk: Misclassification Challenges in Quantifying the Relationship Between Diabetes and Local Access to Healthy Food
<i>Department of Mathematics, University of Scranton</i> | Scranton, PA
March 2025 |
| 11. Guest Lecture: From Idea to Conclusion: A Statistical Perspective
<i>School for Science and Mathematics at Vanderbilt</i> | Nashville, TN
February 2025 |

- | | |
|--|---------------------------------|
| 10. Contributed Poster: Adjusting for covariate misclassification to quantify the relationship between diabetes and local access to healthy food
<i>Women in Statistics and Data Science Conference</i> | Reston, VA
October 2024 |
| 9. Invited Talk: For Better or For Worse: The First Kiss Effect on Television Ratings
<i>International Day of Women in Statistics and Data Science</i> | Virtual
October 2024 |
| 8. Guest Lecture: Stats can be fun, I swear!
<i>PSYCH1130, Cornell University</i> | Virtual
September 2024 |
| 7. Contributed Talk: Adjusting for Measurement Error to Quantify the Relationship Between Diabetes and Local Access to Healthy Food - <i>ENAR Spring Meeting</i> | Baltimore, MD
March 2024 |
| 6. Contributed Poster: Rate This Interruption: Using Interrupted Time Series Techniques to Analyze Popular Television Couples and Episode Ratings
<i>Women in Statistics and Data Science Conference</i> | Bellevue, WA
October 2023 |
| 5. Contributed Poster: Music Feature Classification: Using Techniques of Machine Learning to Detect Genre - <i>Mathematical Association of America MathFest Conference</i> | Philadelphia, PA
August 2022 |
| 4. Contributed Poster: Deal or No Deal: Modeling a Game Show with Utility Theory and Machine Learning - <i>Joint Mathematics Meetings</i> | Virtual
April 2022 |
| 3. Contributed Poster: Deal or No Deal: Modeling a Game Show with Utility Theory and Machine Learning - <i>SACNAS NDiSTEM Conference</i> | Virtual
August 2021 |
| 2. Featured Talk: Deal or No Deal: Modeling a Game Show with Utility Theory and Machine Learning - <i>Mount Stuart Mathematics Seminar Series</i> | Virtual
August 2021 |
| 1. Featured Talk: A Puck Above the Rest: The Effects of New Data on 2020 NHL Draft Decisions
<i>Carnegie Mellon Sports Analytics Conference</i> | Virtual
October 2020 |

PANEL DISCUSSIONS

- | | |
|--|----------------------------|
| 3. Panelist: Graduate Admissions Advice
<i>Electronic Undergraduate Student Research Conference</i> | Virtual
November 2024 |
| 2. Moderator: Statistical Storytelling: Insights Into Effective Presentation Strategies
<i>Women in Statistics and Data Science Conference</i> | Reston, VA
October 2024 |
| 1. Moderator: The Art of the Invite: Crafting Successful Invited Session Proposals
<i>International Day of Women in Statistics and Data Science Conference</i> | Virtual
October 2024 |

SOFTWARE

4. **Author:** Stats can be fun, I swear! - Shiny App
<https://ashley-mullan.shinyapps.io/lecture-app>
3. **Author:** visegen - R Package
<https://github.com/ashleymullan/visegen>
2. **Contributor:** POSSUM - R Package
<https://github.com/sarahlotspeich/possum>
1. **Contributor:** ThemePark - R Package
<https://github.com/MatthewBJane/ThemePark>

TEACHING

3. **Wake Forest University** Winston-Salem, NC
Teaching Assistant: STA111 - Elementary Probability and Statistics Aug 2022 – May 2023
Supervising Professor: Leo Cella, Ph.D.
 - Supported mathematics and statistics undergraduate students in introductory coursework
2. **University of Scranton** Scranton, PA
Teaching Assistant: INTD 290 - Leadership and Civic Responsibility May 2020 – Aug 2020
Supervising Professors: Teresa Grettano, Ph.D. and Stephen Whittaker, Ph.D.
 - Assisted with curriculum revision, facilitated weekly small group discussion, and oversaw student presentations
1. **University of Scranton** Scranton, PA
Sectional Assistant: Performance Music Aug 2018 – May 2022
Supervising Instructor: Cheryl Boga
 - Assisted with group strings lesson facilitation and corrected playing technique
 - Instructed small groups of choir members in aspects of selected choral literature

PROFESSIONAL SERVICE AND OUTREACH

Officer Positions and Committees

- Communications Officer/First Year Liaison, Biostatistics Graduate Student Association, Vanderbilt University 2025–
- Founding Member, Mentorship Committee, ENAR 2025–
- Member, Program Committee, Caucus for Women in Statistics 2025–
- Steering Committee/Social Media Co-Chair, Council for Emerging and New Statisticians (CENS), ENAR 2024–
- Chair/Member, Social Media Committee, ENAR 2023–
- Member, Graduate Honor Council, Wake Forest University 2022–2024
- President, Pi Mu Epsilon Honor Society, University of Scranton 2021–2022
- Secretary, Phi Sigma Tau Honor Society, University of Scranton 2021–2022
- Secretary, Upsilon Pi Epsilon Honor Society, University of Scranton 2021–2022
- President, Mathematics Club, University of Scranton 2018–2022
- Vice President, HackScranton University of Scranton 2019–2021

Volunteer Outreach

- Judge, Undergraduate Statistics Project Competition 2025
- Mentor, Flash Mentoring, Caucus for Women in Statistics 2024
- Pen Pal, Letters to a Pre-Scientist 2024–2025
- Activity Lead, Florence Nightingale Day, Wake Forest University 2024
- Proctor, MathCounts, Wake Forest University 2023
- Dean's Ambassador, College of Arts and Sciences, University of Scranton 2021–2022
- Admission Ambassador, University of Scranton 2019–2022

Conference Activities

- Invited Session Organizer (Frequency)

- * *ENAR Spring Meeting* (1), *Women in Statistics and Data Science* (1), *International Day of Women in Statistics and Data Science* (2)
- Session Chair (Frequency)
 - * *Joint Statistical Meetings* (1), *International Day of Women in Statistics and Data Science* (2), *ENAR Spring Meeting* (1), *Women in Statistics and Data Science* (2)

SKILLS

- **Programming:** R (advanced), SQL (intermediate), Python (intermediate), LaTeX (intermediate), GitHub (intermediate), Shiny (intermediate), Java (intermediate), Cluster Computing (novice), Julia (novice), Power BI (novice), HTML (novice)
- **Applications:** Microsoft Suite (advanced), Google Suite (advanced), Bloomberg Terminal (novice)
- **Languages:** English (native), Spanish (intermediate written and oral proficiency)