

## EDUCATION

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### 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

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### 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

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

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| <p>15. <b>Highly Commended Article, Significance Magazine</b><br/> Designation from the annual Statistical Excellence Award for Early-Career Writing Competition</p> <p>14. <b>Russell G. Hamilton Scholar, Vanderbilt University</b></p> <p>13. <b>Provost's Graduate Fellowship, Vanderbilt University</b></p> <p>12. <b>Graduate Student Award for Outstanding Scholarship, Wake Forest University</b><br/> Awarded by the Department of Statistical Sciences for scholarship, ingenuity, and dedication</p> <p>11. <b>Travel Award, Women in Statistics and Data Science Conference</b><br/> Merit-based award for student or early professional conference attendees</p> <p>10. <b>Gertrude M Cox Scholarship</b><br/> Awarded by the American Statistical Association to an early-career graduate student</p> <p>9. <b>Teaching Assistantship, Wake Forest University</b><br/> Full tuition grant and teaching stipend</p> | <p>2024</p> <p>2024-2029</p> <p>2024-2029</p> <p>2024</p> <p>2023</p> <p>2023</p> <p>2022 – 2024</p> |
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8. **Provost Merit Scholarship, Wake Forest University** 2022 – 2024  
Merit-based graduate student award
7. **Outstanding Poster, Mathematical Association of America MathFest** 2022  
Awarded for excellent project presentation and poster design
6. **Excellence in Applied Mathematics Award, University of Scranton** 2022  
Merit-based department award
5. **Humanities Fellow, University of Scranton Slattery Center** 2021 – 2022  
Undergraduate humanities research grant
4. **Presidential Scholarship, University of Scranton** 2018 – 2022  
Merit-based full-tuition scholarship awarded for exemplary academic achievement
3. **Dean's List, University of Scranton** 2018 – 2022  
Distinction granted to full-time students with a GPA above 3.50
2. **Central Convergence REU Scholar** 2021  
Undergraduate research grant
1. **National Hispanic Scholar, Hispanic Scholarship Fund** 2018 – 2020  
Merit-based distinction and scholarship awarded to university students of Hispanic heritage

## PEER-REVIEWED PUBLICATIONS

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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*, in press, 2025+. Preprint: <https://arxiv.org/abs/2405.16385>.

## PAPERS IN PREPARATION

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1. **A.E. Mullan**, P.D.A. Nguyen, and S.C. Lotspeich, Linking Potentially Misclassified Healthy Food Access to Diabetes Prevalence, 2025+

## PRESENTATIONS

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15. **Guest Lecture:** Statistics in Your Own Backyard Nashville, TN  
*Day of Discovery, Vanderbilt University* May 2025
14. **Contributed Poster:** Visualizing Cost Effectiveness Analysis with Second-Generation New Orleans, LA  
Acceptability Curves - *ENAR Spring Meeting* March 2025
13. **Guest Lecture:** Statistical Ideas You Can Never Unsee Ithaca, NY  
*PSYCH1130, Cornell University* March 2025
12. **Invited Talk:** Misclassification Challenges in Quantifying the Relationship Scranton, PA  
Between Diabetes and Local Access to Healthy Food March 2025  
*Department of Mathematics, University of Scranton*
11. **Guest Lecture:** From Idea to Conclusion: A Statistical Perspective Nashville, TN  
*School for Science and Mathematics at Vanderbilt* February 2025
10. **Contributed Poster:** Adjusting for covariate misclassification to quantify the relationship Reston, VA  
between diabetes and local access to healthy food October 2024  
*Women in Statistics and Data Science Conference*

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

## PANEL DISCUSSIONS

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

## SOFTWARE

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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

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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

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### Officer Positions and Committees

- 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–
- Social Media Co-Chair/Member, 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

- Mentor, Flash Mentoring, Caucus for Women in Statistics 2024
- 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

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- **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)