

EDUCATION

Vanderbilt University Ph.D. in Biostatistics	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. <ul style="list-style-type: none">– 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, <i>Summa Cum Laude</i> , 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. <ul style="list-style-type: none">– 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

8. Lead Teaching Assistant <i>Wake Forest University, Departments of Statistical Sciences and Mathematics</i> Mentor: Lynne Yengulalp, Ph.D. <ul style="list-style-type: none">• Managed scheduling and logistics for over 70 teaching assistants and tutors• Developed resources for pedagogical training and curriculum support	Winston-Salem, NC Mar 2023 – Present
7. Research Assistant <i>Wake Forest University, Department of Statistical Sciences</i> Mentor: Sarah Lotspeich, Ph.D. <ul style="list-style-type: none">• Developed methods for error-prone data• Contributed to ongoing lab projects and manuscripts	Winston-Salem, NC Jan 2023 – Present
6. Data Science Intern <i>Hanesbrands</i> <ul style="list-style-type: none">• Designed and implemented a scalable predictive sales model prototype• Identified a multi-million dollar sales growth opportunity for a major account	Winston-Salem, NC June 2023 – August 2023

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| <p>5. 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>4. 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>3. 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>2. 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>1. Financial Analyst
 <i>VentureBrandUSA LLC</i></p> <ul style="list-style-type: none"> • Developed spreadsheet templates to model investment values over time | <p>Huntington, NY
 January 2012 – Present</p> <p>Virtual
 June 2021 – August 2021</p> <p>Virtual
 June 2020 – August 2020</p> <p>Scranton, PA
 March 2019 – May 2022</p> <p>East Northport, NY
 July 2019 – July 2021</p> |
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HONORS AND AWARDS

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| <p>15. Highly Commended Article, Significance Magazine
 Designation from the annual Statistical Excellence Award for Early-Career Writing Competition</p> <p>14. Russell G. Hamilton Scholar, Vanderbilt University</p> <p>13. Provost's Graduate Fellowship, Vanderbilt University</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>11. Travel Award, Women in Statistics and Data Science Conference
 Merit-based award for student or early professional conference attendees</p> <p>10. Gertrude M Cox Scholarship
 Awarded by the American Statistical Association to an early-career graduate student</p> <p>9. Teaching Assistantship, Wake Forest University
 Full tuition grant and teaching stipend</p> <p>8. Provost Merit Scholarship, Wake Forest University
 Merit-based graduate student award</p> <p>7. Outstanding Poster, Mathematical Association of America MathFest
 Awarded for excellent project presentation and poster design</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> <p>2022 – 2024</p> <p>2022</p> |
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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

PRESENTATIONS

9. **Invited Talk:** Misclassification Challenges in Quantifying the Relationship Between Diabetes and Local Access to Healthy Food
Department of Mathematics, University of Scranton Scranton, PA
March 2025
8. **Guest Lecture:** Stats can be fun, I swear!
PSYCH1130, Cornell University Virtual
September 2024
7. **Contributed Talk:** Adjusting for Measurement Error to Quantify the Relationship Between Diabetes and Local Access to Healthy Food - *ENAR Spring Meeting* Baltimore, MD
March 2024
6. **Contributed Poster:** Rate This Interruption: Using Interrupted Time Series Techniques to Analyze Popular Television Couples and Episode Ratings
Women in Statistics and Data Science Conference Bellevue, WA
October 2023
5. **Contributed Poster:** Music Feature Classification: Using Techniques of Machine Learning to Detect Genre - *Mathematical Association of America MathFest Conference* Philadelphia, PA
August 2022
4. **Contributed Poster:** Deal or No Deal: Modeling a Game Show with Utility Theory and Machine Learning - *Joint Mathematics Meetings* Virtual
April 2022
3. **Contributed Poster:** Deal or No Deal: Modeling a Game Show with Utility Theory and Machine Learning - *SACNAS NDiSTEM Conference* Virtual
August 2021
2. **Featured Talk:** Deal or No Deal: Modeling a Game Show with Utility Theory and Machine Learning - *Mount Stuart Mathematics Seminar Series* Virtual
August 2021
1. **Featured Talk:** A Puck Above the Rest: The Effects of New Data on 2020 NHL Draft Decisions
Carnegie Mellon Sports Analytics Conference Virtual
October 2020

SUBMITTED MANUSCRIPTS

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* (under review), 2024+. Preprint available at <https://arxiv.org/abs/2405.16385>.

PAPERS IN PREPARATION

1. **A.E. Mullan** and S.C. Lotspeich, “Adjusting for Misclassification to Quantify the Relationship Between Diabetes and Local Access to Healthy Food”

ADDITIONAL PROJECTS

4. **Point Made: Exploring Factors that Contribute to Team Success** 2020
Carnegie Mellon Sports Analytics Camp
Mentors: Ron Yurko, Ph.D. and Nick Citrone, M.S.
Coauthor: Alana Willis
 - Modeled NBA season results with regression techniques
3. **Batter Up! Visualizing the 2019 MLB Season** 2020
Carnegie Mellon Sports Analytics Camp
Mentors: Ron Yurko, Ph.D. and Nick Citrone, M.S.
Coauthor: Zhiwei Xiao
 - Visualized results for top hitters of the 2019 baseball season in R
2. **An Analysis of SAT Results for New York City Students of the Class of 2010** 2019
The University of Scranton, Introduction to Data Science
Mentor: Jason Graham, Ph.D.
 - Compared mean SAT scores across the population of New York City high schools
1. **Biodiversity in Bryozoan Garden Communities of the Antarctic Marine Shelf** 2017
Long Island University, Department of Biology
Mentors: Scott Santagata, Ph.D. and Paul Paino
 - Quantified and compared biodiversity indices across the Scotia and Weddell Seas

SOFTWARE

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 MEMBERSHIPS

Committees

- International Biometric Society (IBS), Eastern North America Region (ENAR)
 - * Council for Emerging and New Statisticians (Social Media Co-Chair) 2024-2025
 - * Social Media Committee 2023-2025
- Wake Forest University
 - * Honor Council 2022-2024

Officer Roles

- President
 - * Pi Mu Epsilon, University of Scranton Chapter 2021-2022
- Secretary
 - * Phi Sigma Tau, University of Scranton Chapter 2021-2022
 - * Upsilon Pi Epsilon, University of Scranton Chapter 2021-2022

Memberships

- Eastern North American Region - International Biometric Society 2023-
- American Statistical Association 2023-
- Caucus for Women in Statistics 2023-
- International Biometric Society, Eastern North American Region (ENAR) 2023-
- Alpha Sigma Nu - National Jesuit Honor Society 2022-
- Pi Mu Epsilon - National Honor Society in Mathematics 2021-
- Upsilon Pi Epsilon - International Honor Society in Computing 2021-
- Phi Sigma Tau - International Honor Society in Philosophy 2021-

Conference Activities

- Invited Session Organizer (Frequency)
 - * *ENAR Spring Meeting* (1), *Women in Statistics and Data Science* (1)
- Session Chair (Frequency)
 - * *ENAR Spring Meeting* (1), *Women in Statistics and Data Science* (2)
- Invited Panelist (Frequency)
 - * *Electronic Undergraduate Statistics Research Conference* (1)

LEADERSHIP

Wake Forest University

- Lead Teaching Assistant - Departments of Statistical Sciences and Mathematics Mar 2023 - May 2024
- Facilitated mentorship opportunities for new graduate students

University of Scranton

- College of Arts and Sciences Dean's Ambassador Dec 2021 – May 2022
- Presented student concerns to administrators

Admissions Ambassador	Oct 2019 – May 2022
<ul style="list-style-type: none"> – Panelist for College of Arts and Sciences admission events – Panelist for prospective Special Jesuit Liberal Arts Honors Program student webinar – Mathematics student ambassador at in-person and virtual information sessions – Panelist for virtual information sessions for the Performance Music Department 	
Mathematics Club (President)	Aug 2018 – May 2022
<ul style="list-style-type: none"> – Planned events for students in the department – Organized opportunities for new students to connect with peer mentors 	
HackScranton Club (Vice President)	Aug 2019 – Dec 2021
<ul style="list-style-type: none"> – Facilitated club meetings and activities – Maintained log of club service and social media presence 	
Royal Investment Group	Aug 2018 – May 2021
<ul style="list-style-type: none"> – Promoted computational literacy among club members – Created visualizations of changes in portfolio holdings in R 	
Club Council	Aug 2019 – May 2020
<ul style="list-style-type: none"> – Updated club members on changes to university policy for student organizations – Participated in leadership training sessions 	

LANGUAGES

English

Native Language

Spanish

Intermediate Oral and Written Proficiency

SELECTED SKILLS

Programming and Technical

R (advanced), SQL (intermediate), Python (intermediate), LaTeX (intermediate), GitHub (intermediate), Java (intermediate), Cluster Computing (novice), Julia (novice), Shiny (novice), Power BI (novice)

Applications

Microsoft Suite (advanced), Google Suite (advanced), Bloomberg Terminal (novice)

Other

Data Visualization, Statistical Modeling, Creativity