Ashley E. Mullan

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EDUCATION

Vanderbilt University — Nashville, TN
Ph.D. in Biostatistics — Expected May 2029

Wake Forest University — Winston-Salem, NC
M.S. in Statistics, GPA: 4.00/4.00 — May 2024
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

University of Scranton — Scranton, PA
B.S. in Applied Mathematics and B.A. in Philosophy, *Summa Cum Laude*, GPA: 3.94/4.00 — May 2022
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

St. Anthony's High School — South Huntington, NY
Advanced Regents Diploma — June 2018

RESEARCH AND WORK EXPERIENCE

8. **Lead Teaching Assistant** — Winston-Salem, NC
Wake Forest University, Departments of Statistical Sciences and Mathematics — Mar 2023 – Present
Mentor: Lynne Yengulalp, Ph.D.

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

7. **Research Assistant** — Winston-Salem, NC
Wake Forest University, Department of Statistical Sciences — Jan 2023 – Present
Mentor: Sarah Lotspeich, Ph.D.

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

6. **Data Science Intern** — Winston-Salem, NC
Hanesbrands — 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

5. **Academic Tutor** — Huntington, NY
   Self-Employed — January 2012 – Present

   - Supported students with mathematics and statistics coursework
   - Prepared students for standardized exams

4. **Summer Research Intern** — Virtual
   Central Washington University, Department of Mathematics — June 2021 – August 2021
   Mentor: Sooie-Hoe Loke, Ph.D.

   - 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

3. **Summer Research Intern** — Virtual
   Carnegie Mellon University, Department of Statistics and Data Science — June 2020 – August 2020
   Mentors: Sam Ventura, Ph.D. and Ron Yurko, Ph.D.

   - Worked on visualization and modeling projects in sports analytics using R
   - Attended workshops, talks, and lectures by field experts

2. **Academic Tutor** — Scranton, PA
   University of Scranton, Center for Teaching and Learning Excellence — March 2019 – May 2022

   - Supported individual students with coursework in math, statistics, computing, logic
   - Reinforced classroom instruction for small groups of students on a drop-in basis

1. **Financial Analyst** — East Northport, NY
   VentureBrandUSA LLC — July 2019 – July 2021

   - Developed spreadsheet templates to model investment values over time

Honors and Awards

14. **Statistical Excellence Award for Early Career Writing, Significance Magazine** — 2024
    Article designated as "highly commended" in the annual writing competition

13. **Russell G. Hamilton Scholar, Vanderbilt University** — 2024-2029

12. **Provost's Graduate Fellowship, Vanderbilt University** — 2024-2029

11. **Graduate Student Award for Outstanding Scholarship, Wake Forest University** — 2024
    Awarded by the Department of Statistical Sciences for scholarship, ingenuity, and dedication

10. **Travel Award, Women in Statistics and Data Science Conference** — 2023
    Merit-based award for student or early professional conference attendees

9. **Gertrude M Cox Scholarship** — 2023
   Awarded by the American Statistical Association to an early-career graduate student

8. **Teaching Assistantship, Wake Forest University** — 2022 – 2024
   Full tuition grant and teaching stipend

7. **Provost Merit Scholarship, Wake Forest University** — 2022 – 2024
   Merit-based graduate student award

6. **Outstanding Poster, Mathematical Association of America MathFest** — 2022
   Awarded for excellent project presentation and poster design

5. **Excellence in Applied Mathematics Award, University of Scranton** 2022
Merit-based department award

4. **Humanities Fellow, University of Scranton Slattery Center** 2021 – 2022
Undergraduate humanities research grant

3. **Presidential Scholarship, University of Scranton** 2018 – 2022
Merit-based full-tuition scholarship awarded for exemplary academic achievement

2. **Dean's List, University of Scranton** 2018 – 2022
Distinction granted to full-time students with a GPA above 3.50

1. **Central Convergence REU Scholar** 2021
Undergraduate research grant

0. **National Hispanic Scholar, Hispanic Scholarship Fund** 2018 – 2020
Merit-based distinction and scholarship awarded to university students of Hispanic heritage

PRESENTATIONS

10. **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

9. **Invited Talk:** For Better or For Worse: The First Kiss Effect on Television Ratings Virtual
International Day of Women in Statistics and Data Science October 2024

8. **Guest Lecture:** Stats can be fun, I swear! Virtual
PSYCH1130, Cornell University September 2024

7. **Contributed Talk:** Adjusting for Measurement Error to Quantify the Relationship Baltimore, MD
Between Diabetes and Local Access to Healthy Food - *ENAR Spring Meeting* March 2024

6. **Contributed Poster:** Rate This Interruption: Using Interrupted Time Series Bellevue, WA
Techniques to Analyze Popular Television Couples and Episode Ratings October 2023
Women in Statistics and Data Science Conference

5. **Contributed Poster:** Music Feature Classification: Using Techniques of Machine Philadelphia, PA
Learning to Detect Genre - *Mathematical Association of America MathFest Conference* August 2022

4. **Contributed Poster:** Deal or No Deal: Modeling a Game Show with Utility Theory and Virtual
Machine Learning - *Joint Mathematics Meetings* April 2022

3. **Contributed Poster:** Deal or No Deal: Modeling a Game Show with Utility Theory and Virtual
Machine Learning - *SACNAS NDiSTEM Conference* August 2021

2. **Featured Talk:** Deal or No Deal: Modeling a Game Show with Utility Theory and Virtual
Machine Learning - *Mount Stuart Mathematics Seminar Series* August 2021

1. **Featured Talk:** A Puck Above the Rest: The Effects of New Data on 2020 NHL Draft Decisions Virtual
Carnegie Mellon Sports Analytics Conference October 2020

PAPERS IN PREPARATION

2. S.C. Lotspeich, **A.E. Mullan**, L. D'Agostino McGowan, and S. Hepler, "Combining straight-line and map-based distances to investigate the connection between proximity to healthy foods and disease."

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
  – 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
  – 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
  – Facilitated club meetings and activities
  – Maintained log of club service and social media presence

Royal Investment Group   Aug 2018 – May 2021
  – Promoted computational literacy among club members
  – Created visualizations of changes in portfolio holdings in R

Club Council   Aug 2019 – May 2020
  – 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 (intermdiate), 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