

Nathan Szeto

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Education

Biostatistics Ph.D., August 2025 – Present
University of Michigan School of Public Health, Ann Arbor, MI

Biostatistics M.S., GPA: 4.00 August 2023 – April 2025
University of Michigan School of Public Health, Ann Arbor, MI

Mathematics B.A., GPA: 3.62 August 2019 – June 2023
Williams College, Williamstown, MA

Relevant Coursework: Multivariable Calculus; Discrete Math; Linear Algebra; Graph Theory; Probability; Real Analysis; Abstract Algebra; Statistical Design of Experiments; Regression Theory; Statistical Learning and Data Mining; Data Structures and Advanced Programming; Computer Organization

General Course Certificate September 2021 – June 2022
London School of Economics & Political Science, London, UK

Research Experience

Graduate Student Research Assistant August 2025 – Present
University of Michigan School of Public Health, Ann Arbor, MI

- Perform statistical analyses for ancillary studies for Diabetic Foot Consortium (DFC)
- Identify predictive biomarkers for diabetic foot ulcer (DFU) patient outcomes
- Explore data integration methods for ancillary study data

Biostatistics Research Assistant September 2023 – April 2025
University of Michigan School of Public Health, Ann Arbor, MI

- Draft manuscript for project to predict COVID-19 case counts using Sparse Partial Least Squares model built using data collected via wastewater-based epidemiological methods
- Draft manuscript addressing optimization of sewage manhole sampling set selection for wastewater-based epidemiological purposes
- Maintain/update sleep duration estimation R package to align with new R and C++ integration protocols
- Coordinate and lead research team meetings for wastewater analysis manuscripts
- Supervise undergraduate research assistant in validating air quality/kidney transplantation manuscript

Statistics Independent Study Advisee September 2022 – May 2023
Williams College, Williamstown, MA

- Apply rejection method sampling to the distribution of the circular beta ensemble through a general implementation in R
- Demonstrate mathematically that rejection method sampling can be applied in the multivariate context
- Present these findings to a panel of mathematics faculty members

Biostatistics Research Associate June 2022 – August 2022
University of Michigan School of Public Health, Ann Arbor, MI

- Develop R package to implement sleep detection algorithm to generate sleep duration estimates
 - Available on [CRAN](#)
- Identify data sources on sleep, genomics, and aging to inform future research

Presentations and Publications

Presentations

- “Fostering Resilience in Michigan Schools: A Trauma-informed Study.” *Data Science Night @ U-M*. University of Michigan. April 2024.
- “Sampling from the Circular Beta Ensemble using the Rejection Method.” *Senior Mathematics Colloquium*. Williams College. May 2023.

Publications

- Szeto, N.; Wu, J.; Wang, Y.; Li, X.; Zheng, Z.; Zhang, L.; Neitzel, R.; Eisenberg, M.; Dvorch, J. T.; Franzblau, A.; Song, P. X. K.; Xi, C. (2024). Wastewater Surveillance with Machine Learning Methods to Assess Underreporting of COVID-19 Case Counts. (*Manuscript accepted with revisions*)

Teaching Experience

Graduate Student Instructor

January 2025 – April 2025

BIOSTAT 651 – Theory and Application of Generalized Linear Models

University of Michigan School of Public Health, Ann Arbor, MI

- Grade and provide feedback on homework assignments and exams
- Hold office hours to clarify questions regarding homework and other conceptual questions
- Identify and communicate student strengths/weaknesses with course instructors

Graduate Student Instructor

August 2024 – December 2024

BIOSTAT 650 – Theory and Application of Linear Regression

University of Michigan School of Public Health, Ann Arbor, MI

- Assist with development and grading of homework assignments and exams
- Hold office hour sessions to assist students with homework problems and clarify theoretical concepts
- Discuss student learning progress with course instructors and other GSIs during weekly meetings

Teaching Assistant

February 2021 – May 2021

CSCI 136 – Data Structures & Advanced Programming

Williams College, Williamstown, MA

- Hold help sessions to assist students with homework and conceptual questions
- Grade and provide feedback on coding and theoretical assignments

Teaching Assistant

September 2020 – December 2020

MATH 151 – Multivariable Calculus

Williams College, Williamstown, MA

- Hold office hour sessions to assist students with course content-related questions
- Assist with grading of homework assignments and provide relevant feedback

University Service

Biostatistics MS Admissions Committee Member

August 2025 – Present

University of Michigan School of Public Health, Biostatistics Department, Ann Arbor, MI

Biostatistics AI, Computing, and Website Committee Member

August 2025 – Present

University of Michigan School of Public Health, Biostatistics Department, Ann Arbor, MI

STATCOM Co-President

April 2025 – Present

University of Michigan School of Public Health, STATCOM, Ann Arbor, MI

STATCOM Leadership Team Member

August 2024 – April 2025

University of Michigan School of Public Health, STATCOM, Ann Arbor, MI

Biostatistics Student Recruitment Committee Member

August 2024 – April 2025

University of Michigan School of Public Health, Biostatistics Department, Ann Arbor, MI

Biostatistics Peer Mentor

July 2024 – April 2025

University of Michigan School of Public Health, Biostatistics Department, Ann Arbor, MI

STATCOM Consultant

September 2023 – May 2024

University of Michigan School of Public Health, STATCOM, Ann Arbor, MI

Biostatistics DEI Committee Member

September 2023 – May 2024

University of Michigan School of Public Health, Biostatistics Department, Ann Arbor, MI

Honorary Degree Advisory Committee Member

September 2022 – June 2023

Williams College, Williamstown, MA

Minority Coalition Treasurer

August 2020 – June 2021

Williams College, Williamstown, MA

Awards

Outstanding First-Year MS Student Award, Honorable Mention

November 2024

University of Michigan School of Public Health, Biostatistics Department, Ann Arbor, MI

Technical Skills

- **Programming languages:** R (advanced), Python (intermediate), C++ (beginner), LaTeX (intermediate)
- **Other software:** Adobe Photoshop, office products (Microsoft and Google)