

AMBER DAY

EDUCATION

University of Texas at Austin

Statistics and Data Sciences, PhD - GPA - 3.97

August 2020 – present

Austin, Texas

The College at Brockport

Mathematics, MA - GPA - 4.00

August 2018 – August 2020

Brockport, New York

University of Rochester

Mathematics Education, MS - GPA - 3.97

May 2016 – August 2017

Rochester, New York

Texas State University

Mathematics, BS - GPA - 4.00

January 2014 – May 2016

San Marcos, Texas

Austin Community College

Mathematics, AS - GPA - 3.66

January 2011 – December 2013

Austin, Texas

RESEARCH INTERESTS

Artificial Intelligence and Machine Learning

- Deep Learning
- Complex-valued Neural Networks
- Signal Denoising
- Applications in Physics

RESEARCH EXPERIENCE

Complex-Valued Neural Networks for Signal Denoising with Natalie Klein

- *Current:* Working on the Detecting Synthetic Opioids Laboratory Directed Research and Development project. Analyzing data and developing/applying machine learning and statistical tools for signal detection and denoising.

Deep Learning with Sinead Williamson

- *Current:* Working on applying Deep Learning models to physics applications using PyTorch.

Bayesian Sparse Functional Graphical Models with Abhra Sarkar

- Worked on developing an algorithm to estimate the edges in functional graphical models.

Genome-Wide Association Study (GWAS) with Arbel Harpak

- Compared single nucleotide polymorphism (SNP) effect sizes on educational attainment between individuals who moved away from place of birth and individuals who stayed. Learned the basics of running jobs on Texas Advanced Computing Center (TACC).

Prime Numbers with Gabriel Prajitura

- Compared differences of consecutive prime numbers.

COURSEWORK

- Bayesian statistics
- Theoretical Statistics
- Linear Models
- Mathematical Statistics
- Monte Carlo Methods
- Statistical Modeling
- Missing Data Analysis

PRESENTATIONS

Detecting Synthetic Opioids with NQR Spectroscopy and Complex-Valued Signal Denoising - Los Alamos National Lab Student Symposium, August 2022

POSTER SESSIONS

MAA Seaway Conference - Comparing Differences of Consecutive Prime Numbers, April 2019

SUNY Brockport Scholars Day - Comparing Differences of Consecutive Prime Numbers, April 2019

TECHNICAL SKILLS

Statistical & Data Analysis: R, Python, Excel

Other Software & Tools: LaTeX, Microsoft Word, PowerPoint

AWARDS

UT Austin: Dean's Mentoring Fellowship – \$34,000, tuition waiver & benefits – August 2021

UT Austin: Recruiting Bonus – \$4,000 – August 2020

UT Austin: Dean's Mentoring Fellowship – \$34,000, tuition waiver & benefits – August 2020

SUNY Brockport: Graduate Assistantship – \$15,500 – August 2018

University of Rochester: Warner School Scholarship – \$53,000 – May 2016

Texas State University: Emmie Craddock Scholarship – \$1,500 – April 2015

Texas State University: Ross and Sarah Wayment Endowed Scholarship – \$1,500 – April 2015

Austin Community College: Austin Kiwanis Club Scholarship – \$1,000 – August 2011

Austin Community College: Austin Rotary Club Scholarship – \$1,200 – August 2011

EMPLOYMENT HISTORY

Graduate Research Assistant

Los Alamos National Lab

May 2022 – Present

Remote

- Conduct machine learning research in the Statistical Sciences Group (CCS-6).

Teacher

Rochester City School District

February 2020 – August 2020

Rochester, NY

- Instruct high school students in algebra and geometry.

Adjunct Lecturer

SUNY Brockport

August 2019-January 2020

Brockport, NY

- Instruct students in business calculus.

Adjunct Professor

Monroe Community College

August 2018-January 2020

Brighton, NY

- Instruct students in developmental mathematics.

Graduate Assistant

SUNY Brockport

August 2018-January 2020

Brockport, NY

- Tutor Mathematics for the Living Learning Communities program.

Educational Opportunity Program (EOP) Instructor*Summer 2019***Monroe Community College***Brighton, NY*

- Teach college survival skills to pre-freshman in summer bridge program.

Teacher*April 2017-August-2018***Rochester City School District***Rochester, NY*

- Instruct 7th and 8th grade mathematics and science.

Camp Counselor*Summer 2015***Texas State University***San Marcos, TX*

- Help campers to deepen their understanding of and love for mathematics.

Mathematics Tutor*October 2013-December 2015***Austin Community College***Austin, TX*

- Tutor mathematics.

Grader*August 2014-December 2014***Texas State University***San Marcos, TX*

- Grade differential equations assignments.

Supplemental Instruction Leader*January 2013-December 2013***Austin Community College***Austin, TX*

- Organize and hold group study sessions for pre-algebra.

Field Manager*Summer 2013***Grassroots Campaigns***Austin, TX*

- Recruit, train, and manage a team of activists.

Group Leader*January 2012-June 2012***Extend-A-Care***Austin, TX*

- Supervise elementary students in after-school program.