

Amber Day

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EDUCATION

AS in Math	BS in Math	MS Math Ed	MA Math	PhD Statistics & Data Sciences
University of Texas at Austin				August 2020 – present Austin, Texas
Statistics and Data Sciences, PhD - GPA - 3.98				
The College at Brockport				August 2018 – August 2020 Brockport, New York
Mathematics, MA - GPA - 4.00				
University of Rochester				May 2016 – August 2017 Rochester, New York
Mathematics Education, MS - GPA - 3.97				
Texas State University				January 2014 – May 2016 San Marcos, Texas
Mathematics, BS - GPA - 4.00				
Austin Community College				January 2011 – December 2013 Austin, Texas
Mathematics, AS - GPA - 3.66				

RESEARCH INTERESTS

Statistics and Data Sciences

- Deep Learning, Time Series Analysis, Complex-Valued Neural Networks, Signal Denoising, Classification, Bayesian Optimization, Bayesian Active Learning, Bayesian Neural Networks, Applications in Physics

RESEARCH EXPERIENCE

Complex-Valued Signal Denoising and Bayesian Optimization for Detection of Synthetic Opioids with Natalie Klein (Los Alamos National Laboratory)

- *Current:* Working on developing/applying machine learning and statistical tools for signal detection and for denoising complex-valued time series data. Using Bayesian optimization to inform physics experiments. Running jobs on the Darwin cluster.

Deep Learning with Sinead Williamson (UT Austin)

- *Current:* Working on developing deep learning models for physics applications using PyTorch.

Bayesian Sparse Functional Graphical Models with Abhra Sarkar (UT Austin)

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

Genome-Wide Association Study (GWAS) with Arbel Harpak (UT Austin)

- GWAS of educational attainment. Ran jobs on Texas Advanced Computing Center (TACC).

Prime Numbers with Gabriel Prajitura (SUNY Brockport)

PUBLICATIONS

Natalie Klein, **Amber J. Day**, Harris Mason, Michael W. Malone, Sinead A. Williamson. Denoising Neural Networks for Nuclear Resonance Spectroscopy. *Submitted to ICASSP 2023*.

PRESENTATIONS

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

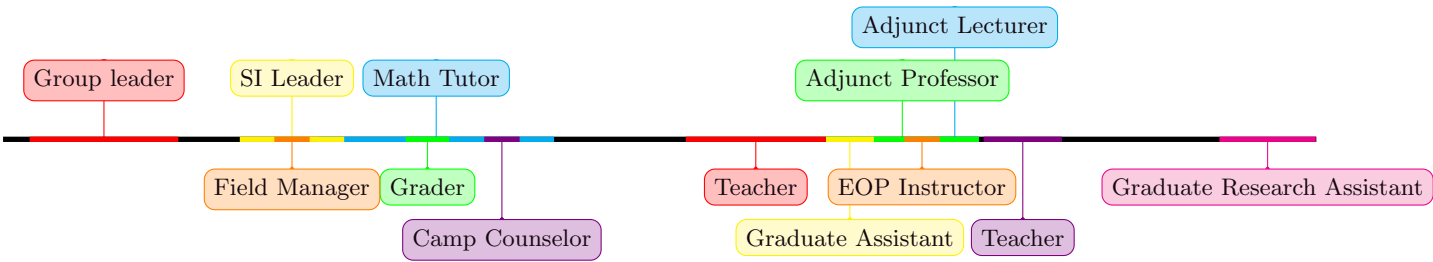
POSTER SESSIONS

WiML Workshop @ NeurIPS - Detecting Synthetic Opioids with NQR Spectroscopy and Complex-Valued Signal Denoising, November 2022

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

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

RELEVANT EXPERIENCE

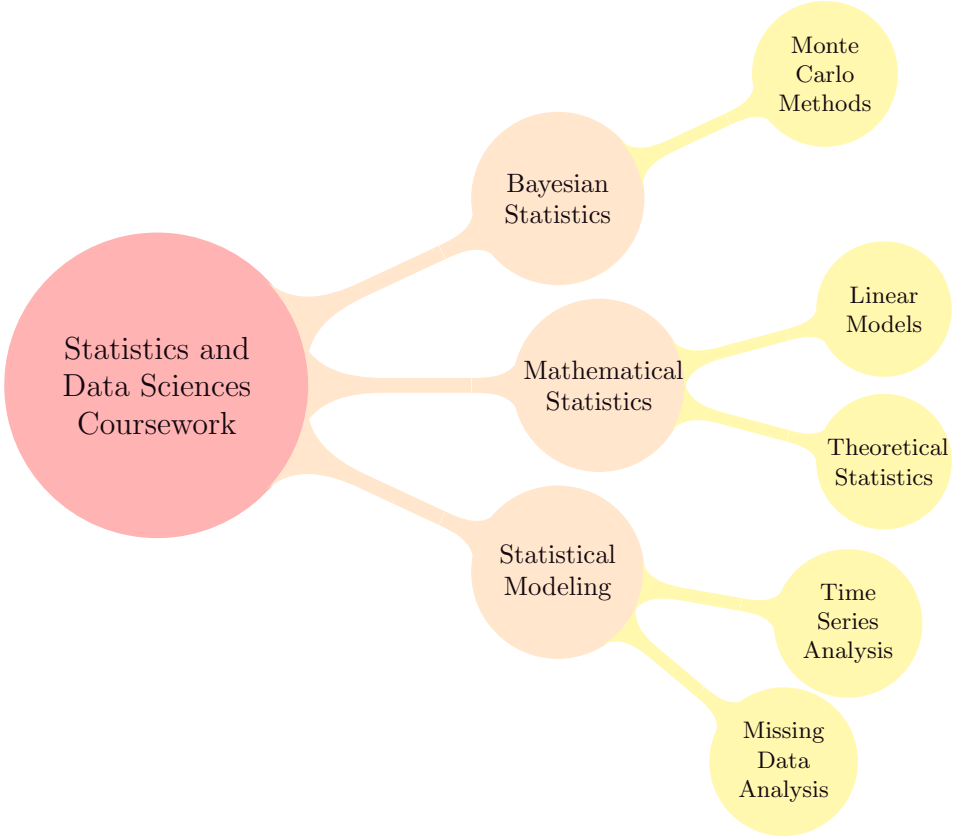


Graduate Research Assistant (GRA) <i>May 2022 – Present</i> <ul style="list-style-type: none">Conduct machine learning research in the Statistical Sciences Group.	Los Alamos National Laboratory <i>Remote</i>
Teacher <i>February 2020 – August 2020</i> <ul style="list-style-type: none">Instruct high school students in algebra and geometry.	Rochester City School District <i>Rochester, NY</i>
Adjunct Lecturer <i>August 2019-January 2020</i> <ul style="list-style-type: none">Instruct students in business calculus.	SUNY Brockport <i>Brockport, NY</i>
Adjunct Professor <i>August 2018-January 2020</i> <ul style="list-style-type: none">Instruct students in developmental mathematics.	Monroe Community College <i>Brighton, NY</i>
Graduate Assistant <i>August 2018-January 2020</i> <ul style="list-style-type: none">Tutor Mathematics for the Living Learning Communities program.	SUNY Brockport <i>Brockport, NY</i>
Educational Opportunity Program (EOP) Instructor <i>Summer 2019</i> <ul style="list-style-type: none">Teach college survival skills to pre-freshman in summer bridge program.	Monroe Community College <i>Brighton, NY</i>
Teacher <i>April 2017-August-2018</i> <ul style="list-style-type: none">Instruct 7th and 8th grade mathematics and science.	Rochester City School District <i>Rochester, NY</i>
Camp Counselor <i>Summer 2015</i> <ul style="list-style-type: none">Help campers to deepen their understanding of and love for mathematics.	Texas State University <i>San Marcos, TX</i>
Mathematics Tutor <i>October 2013-December 2015</i> <ul style="list-style-type: none">Tutor mathematics.	Austin Community College <i>Austin, TX</i>
Grader <i>August 2014-December 2014</i> <ul style="list-style-type: none">Grade differential equations assignments.	Texas State University <i>San Marcos, TX</i>
Supplemental Instruction Leader <i>January 2013-December 2013</i> <ul style="list-style-type: none">Organize and hold group study sessions for pre-algebra.	Austin Community College <i>Austin, TX</i>
Field Manager <i>Summer 2013</i> <ul style="list-style-type: none">Recruit, train, and manage a team of activists.	Grassroots Campaigns <i>Austin, TX</i>
Group Leader <i>January 2012-June 2012</i> <ul style="list-style-type: none">Supervise elementary students in after-school program.	Extend-A-Care <i>Austin, TX</i>

AWARDS

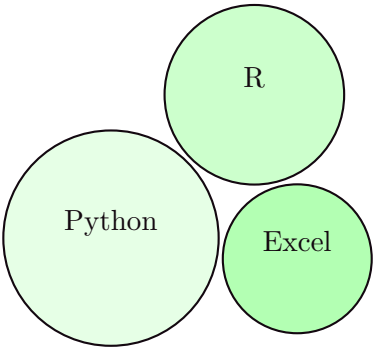
- UT Austin: Dean’s Mentoring Fellowship – \$34,000/year, tuition waiver & benefits – August 2020 & August 2021
- UT Austin: Recruiting Bonus – \$4,000 – August 2020
- SUNY Brockport: Graduate Assistantship – \$15,500 – August 2018
- University of Rochester: Warner School Scholarship – \$53,000 – May 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

COURSEWORK



TECHNICAL SKILLS

Statistical & Data Science



Other Software & Tools

LaTeX	PowerPoint
	Word