Isaac Ray

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College Station, Texas

Aug 2021-May 2025

Aug 2018-May 2021

EDUCATION

Texas A&M University

Ph.D. in Statistics, Advised by Dr. Huiyan Sang

B.S. in Applied Mathematical Sciences, GPA: 3.96/4.00

- Minor in Statistics, Minor in Computer Science
- Summa Cum Laude
- Honors in Mathematics

HIGHLIGHTED COURSEWORK

- Computational Statistics
- Statistical Consulting & Ethics
- Measure Theoretic Probability
- Bayesian Modeling & Inference
- Advanced Bayesian Computation
- Statistical Methodology
- Applied Data Science

- Spatial Statistics
- Database Management
- Numerical Analysis & Optimization
- High Performance Computing
- Data Structures & Algorithms
- Network Data Analysis
- Functional Programming

EXPERIENCE

Texas A&M University - Department of Statistics

NSF Graduate Research Fellow Graduate Research Assistant Aug 2023–May 2025 Dec 2021–May 2022

College Station, Texas

- $-\,$ Developed method for density estimation on complex and constrained domains in a Bayesian framework
- Published R package implementing this density method and a regression method under similar constraints

Graduate Assistant Teacher

Aug 2021-Dec 2021

- Prepared and taught material on generative models, clustering, dimension reduction, hypothesis testing, classification and regression, and experimental design to a class of over 100 students
- Assisted faculty instructor with grading assignments

Los Alamos National Laboratory

Mathematical Sciences Graduate Intern

May 2023-Jul 2023

 Developed an image clustering pipeline using large scale deep learning networks and Bayesian Nonparametrics to group remote sensing imagery into fully unspecified categories

Shell USA

Data Scientist Feb 2022–Dec 2022

 Presented research and software for additive models performing regression and density estimation on domains with complex geometries

Texas A&M University - Division of IT

Student Supervisor

College Station, Texas Aug 2019–May 2021

- Supervised daily operations of the Help Desk comprised of up to 20 concurrently active technicians providing service to over 100,000 campus members
- Aided in incident response, service provision, training curriculum development, and policy decisions within the Division of IT

Student Technician Oct 2018–Aug 2019

- Provided technical support by working directly with University affiliates in person, over the phone, and through written communication
- Coordinated with all other teams in the Division of IT to resolve over 10,000 incidents

JERL H&B Laboratories - ARG Labs

Dallas, Texas

IT Consultant

May 2019-Aug 2019

- Directed \$1000 in computing infrastructure upgrades
- Developed new system for formula pricing and inventory management using scripted documents

SKILLS LANGUAGES

- **Proficient:** Git, Office Suite, Data Visualization, Technical Writing
- Intermediate: Cloud Services, Computing Hardware
- Familiar: Distributed Computing, Operating Systems
- **Proficient:** R, Quarto, C++, Neo4J, Python, SQL, LATEX
- Intermediate: C, Haskell, Java
- Familiar: JavaScript, VBA

PROJECTS

BASTION (R, C++)

Author / Maintainer

College Station, Texas

Dec 2021-Present

 Wrote an R package implementing specialized graph operations with a vignette example of performing non-parametric regression and density estimation on data lying on complex or constrained domains

TAMU Datathon 2021 (R, Shiny)

College Station, Texas

Submitter

Oct 2021

- Scraped and compiled retail coffee menu data into an R Shiny app

TAMU COVID-19 Dashboard (R, Shiny)

Co-Team Lead

College Station, Texas

Aug 2020–Dec 2020

 Developed a dashboard using R to automatically fetch, clean, and process data related to COVID-19 in order to generate visualizations to be used by the Texas A&M Health Science Center and University administration

EXTRACURRICULAR ACTIVITIES & CERTIFICATIONS

President of Statistics Graduate Student Association

 $May\ 2023{\rm-Present}$

• Graduate Student Enhancement Working Group - Statistics Representative

Nov 2022—Present

Designed a survey for College of Arts & Sciences graduate students to understand factors hindering their progress
then presented a report to the Associate Dean for graduate studies for dissemination among the faculty senate

• Vice President of Statistics Graduate Student Association Sep 2022–May 2023

Organized a Graduate Student Panel where senior Ph.D. students can advise new graduate students in a casual environment & assisted in the organization of other events put on by SGSA

• Data Science Camp Counselor

Aug 2022

Led interactive sessions on data management and machine learning models to high school students in order to demonstrate the power of statistics and encourage them to attend college to pursue related topics

• Graduate Mentoring Fellow

Learned and demonstrated the mentoring competencies of: Maintaining Effective Communication, Aligning

Expectations, Assessing Understanding, Addressing Equity and Inclusion, Fostering Independence, Promoting

Professional Development, and Articulating my Mentoring Philosophy and Plan

Scholarships & Awards

• Texas A&M GREAT Program	Aug 2023
• George M & Mary B Lewis Merit Endowed Scholarship	Aug 2023
• Mr. William Triche '50 Scholarship in Science	Aug 2023
• National Science Foundation - Graduate Research Fellowship	Mar 2023
• Lechner Graduate Grant	Aug 2021
• Mathematics Honors Student	Aug 2018–May 2021
• President's Endowed Scholar	Aug 2018–May 2021
• Phi Kappa Phi Inductee	Apr 2021
• University Honors Student	$\mathrm{Aug}\ 2018\mathrm{-Jan}\ 2021$
• William A. Triche and Homer A. Triche Endowed Scholarship	Aug 2020
• Jack and Nancy Matz Scholarship	May 2020
• Pi Mu Epsilon Inductee	Apr 2020
• Dean's Honor Roll	Jan 2019–Dec 2019
• National Merit Scholar	May 2018