

# Isaac Ray

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## EDUCATION

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### Texas A&M University

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

College Station, Texas

Aug 2021–May 2025

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

Aug 2018–May 2021

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

## HIGHLIGHTED COURSEWORK

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- 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

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### 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 - Department of Statistics

College Station, Texas

Research Assistant

Dec 2021–Present

- 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

### Texas A&M University - Division of IT

College Station, Texas

Student Supervisor

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

IT Consultant

Dallas, Texas

May 2019–Aug 2019

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

## SKILLS

- **Proficient:** Git, Office Suite, Data Visualization, Technical Writing
- **Intermediate:** Cloud Services, Computing Hardware
- **Familiar:** Distributed Computing, Operating Systems

## LANGUAGES

- **Proficient:** R, Quarto, C++, Neo4J, Python, SQL,  $\text{\LaTeX}$
- **Intermediate:** C, HTML, 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)

Submitter

College Station, Texas

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

- Helped to develop 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

- Vice President of Statistics Graduate Student Association Sep 2022–Present  
*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 Jan 2022  
*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

- Lechner Graduate Grant Aug 2021
- Mathematics Honors Student Aug 2018–May 2021
- President's Endowed Scholar Aug 2018–May 2021

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|---|-------------------|
| • Phi Kappa Phi Inductee                                    | Apr 2021          |
| • University Honors Student                                 | Aug 2018–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          |