

Rose K Graves

Curriculum Vitae

Houston, TX — rosekgraves@gmail.com — <https://rose-graves.github.io/>

EDUCATION

Rice University Statistics Ph.D.

Fall 2022 - Spring 2027

Advisors: Dr. Marina Vannucci & Dr. Scott Powers

Thesis Committee: Dr. Kathy Ensor & Dr. Amanda Glazer

Rice University Statistics M.A.

Fall 2022 - Summer 2026

Duke University Statistical Science B.S

Fall 2016 - Spring 2020

Thesis: “Corrupted Data and the Illicit Arms Trade”

Advisor: Dr. Alexander Volfovsky

Minors: Mathematics & French

PUBLICATIONS

In Progress

1. **Graves, R.**, Powers, S., Glazer, A., Vannucci, M. (2026+). “Bayesian Hierarchical Change Point Models for Pitcher Biomechanics”. In preparation.
2. Powers, S., **Graves, R.**, Glazer, A., Buffi, J., Barrueco, D., D’angelo, J., Vannucci, M. (2026+). “A Large-Scale Study of Pitch-Tracking Risk Factors for Professional Baseball Pitcher Injuries”. Submitted.

Publications

3. **Graves, R.**, Kowal, D., & Vannucci, M. (2026). “Bayesian Multivariate Rank Regression Models for the Analysis of Sports Data”. *Journal of Quantitative Analysis of Sports*,
4. Sérgio Boggio, P., Gaudêncio Rêgo, G., AC Everett, J., Graziela Bonato Vieira, **Graves, R.**, & Sinnott-Armstrong, W. (2023). “Who did it? Moral wrongness for us and them in the UK, US, and Brazil”. *Philosophical Philosophy*, 1-21. <https://doi.org/10.1080/09515089>
5. McDonald, K.*, **Graves, R.***, Yin, S., Weese, T., & Sinnott-Armstrong, W. (2021). “Valence Framing Effects on Moral Judgements: A Meta Analysis”. *Cognition*, 212, 104703. (*Co-first author)
6. Nadelhoffer, T., **Graves, R.**, Skorburg, G., Leary, M., & Sinnott-Armstrong, W. (2020). “Partisanship, humility, and Epistemic Polarization”. *Polarization, Arrogance, and Dogmatism: Philosophical Perspectives* (1st ed.). London, UK: Routledge.
7. Nadelhoffer, T., Yin, S., & **Graves, R.** (2020). “Folk Intuitions and the Conditional Ability to Do Otherwise”. *Philosophical Psychology*, 33, 968-996.

AWARDS

1. Future Faculty Fellowship, Rice University
2. Ken Kennedy Recruitment Fellowship, Rice University
3. Statistics in Sports Section Travel Award, American Statistical Association
4. Graduation with Highest Distinction, Duke University
5. Forever Duke Student Leadership Award, Duke University
6. Dean's List 2016 & 2017, Duke University

PRESENTATIONS & CONFERENCES

Invited Talks

(Upcoming) Carnegie Mellon Sports Analytics Conference (2026)
Bayesian Hierarchical Change Point Models for Pitcher Biomechanics

Contributed Talks

Joint Statistical Meetings (2026)
Bayesian Hierarchical Change Point Models for Pitcher Biomechanics

(Upcoming) International Conference on Statistics, Data Science, and Computing for the Environment and Climate Change (2026)
*Forecasting Red Tide (*Karenia Brevis*) Movements on the Florida Gulf Coast*

(Upcoming) Cascadia Symposium on Statistics in Sports (2026)
Bayesian Hierarchical Change Point Models for Pitcher Biomechanics

Conference for Texas Statisticians (2026)
Bayesian Hierarchical Change Point Models for Pitcher Biomechanics

Symposium on Data Science and Statistics (2025)
Bayesian Multivariate Rank Regression Models for the Analysis of Sports Data

Posters

(Upcoming) The International Statistical Ecology Conference (2027)
*Forecasting Red Tide (*Karenia Brevis*) Movements on the Florida Gulf Coast*

Conference for Texas Statisticians (2025)
Bayesian Multivariate Rank Regression Models for the Analysis of Sports Data

Seminars

Sports Analytics Course at California Polytechnic State University (2026)
My Path into Sports and Advice for Breaking into the Sports Industry

EXPERIENCE

Sports Experience

San Francisco Giants Baseball Associate Analyst

Spring 2023 – Present

San Francisco, Research and Development

- Uses Bayesian Statistics methods to solve problems in player evaluation, player development, baseball strategy, and health.
- Collaborates with the Amateur Scouting department to improve both evaluation of amateur players and draft strategy both before and during the draft.
- Implements large language models for scouting report data collection.
- Improvements in the modeling framework for evaluating player defense.
- Provides explanations of complex models and analyses by delivering visuals and graphics to aid in increased understanding.

Houston Astros Baseball Operations Bayesian Analyst *Summer 2020 - Fall 2022*

Houston, Research and Development

- Created a new model to evaluate high school and college pitchers and batters for the 2021 & 2022 MLB draft.
- Created and implemented novel Bayesian methods to aggregate scouting data.
- Overhauled methods of predicting players' future injuries.
- Collaborated with departments across the organization including scouts and coaches.

International Experience

Political Studies Institute

Fall 2018

Strasbourg, France

- Completed rigorous political science courses in French.
- Gained a global perspective on international politics and conflicts.

National Territorial Studies Intern — Institut National des Études Territoriales (INET)

Fall 2018

Strasbourg, France

- Improved the Institute's interactive educational website that aims to help educate French regional authorities.
- Made the statistics web page more comprehensive by carrying out exploratory data analysis on data regarding local authorities in Europe.
- Translated educational documents from French to English and helped create a glossary of industry specific terms in both languages.

TEACHING

Primary Instructor

Probability and Statistics (STAT 310)
Rice University Department of Statistics

Spring 2026, Fall 2025

Seminar in Sports Analytics (SMGT 490)
Rice University Department of Sports Management

Spring 2025

Teaching Assistant

Probability and Statistics (STAT 310)
Rice University Department of Statistics

Spring 2025, Fall 2023

Linear Regression (STAT 615)
Rice University Department of Statistics

Fall 2023

Senior Capstone Project (STAT 450)
Rice University Department of Statistics

Spring 2023, Fall 2022

Introductory Statistics (STAT 101)
Duke University Department of Statistical Science

Spring 2020, Fall 2020, Spring 2019

SERVICE & MENTORSHIP

Service at Rice University

American Statistical Association Rice University Chapter President *Fall 2025 - Present*

Serves as one of the founding presidents for the Rice University chapter of the American Statistical Association. Organizes events and initiatives catering to the needs of students interested in statistics with aims to create an inclusive welcoming environment for all students in the statistics department.

Hutchinson Leadership Initiative in Sport Analytics Assistant Director *Spring 2026 - Present*

Within the Sports Management Department this lab is for undergraduate students completing sports analytics research or students that are providing analytics to a Rice Varsity sports team. I meet with students on a weekly basis to provide guidance, support, and assistance with their projects.

American Soccer Insights Conference Organizer

Fall 2024 - Present

The American Soccer Insights Conference had its inaugural conference in January 2025 and the second in January 2026, with participants from the Premier League, NWSL, MLS, and many other leagues across the globe. I organized the Women in Soccer Networking Event to celebrate the accomplishments of women in the field of soccer analytics and provide a welcoming and inclusive environment for networking.

Graduate Student Mentor for Statistics PhD Students *Fall 2025 - Present*

Underwent mentor training to serve as a point person for two assigned mentees within the statistics department. Has monthly in person chats with mentees to answer any questions about PhD life or address any concerns.

GSA Teaching Committee Representative *Fall 2025 - Present*

Advocates for improved support on teaching and resources for instructors and teaching assistants.

Data to Knowledge Research Mentor *Fall 2025*

Served as a mentor for data science masters students completing their capstone project: “Generative AI in Soccer: Leveraging RAG for a Soccer Assistant Coachbot (SAC)”

Research Experience for Undergraduates Coordinator *Summer 2023 & 2024*

Held weekly conversations between faculty and students, and bi-weekly meetings for students to present their work and receive feedback among a small group. Assisted with any concerns and questions regarding graduate student applications, life, classes, and research.

Service at Duke University

Duke Statistical Science Majors Union President *Fall 2019 - Spring 2020*

Revived the Statistical Science Majors Union after months of inactivity and positioned it for future students to grow the organization. Served as the President, held weekly group meetings, organized events, moderated panels, and provided opportunities for collaborations between students and faculty.

Lab Manager of Moral Attitudes and Decision-Making Lab *Summer 2019 - Spring 2020*

Organized and led weekly meetings to discuss current philosophical research, plan and implement experimental philosophy research studies, and give feedback to current members' work. Prepared and submitted experiment approval documents to the Institutional Review Board.