

Jericho Lawson

Curriculum Vitae – Aug. 2025

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EDUCATION

Ph.D. in Applied Statistics – <i>University of California, Riverside</i>	2025
• <u>Dissertation:</u> ImgKnock: Knockoffs for Image Data via Latent Representation Learning (Advisor: Dr. Zhe Fei)	
M.S. in Statistics – <i>University of California, Riverside</i>	2022
B.S. in Applied Mathematics; Statistics & Data Science (Honors) – <i>University of Arizona</i>	2020
• <u>Thesis:</u> “Legitimate or Unfair?: An Evaluation and Improvement of the College Football Playoff Using Logistic Regression and Adjacency Matrices” (Advisor: Dr. Joseph Watkins)	
• <u>Minors:</u> Sports Management, Computer Science	

EMPLOYMENT

Lecturer (VAP) – <i>Dept. of Statistical & Data Sciences – Smith College</i>	2025 – present
Associate Instructor – <i>Dept. of Statistics – University of California, Riverside</i>	2023 – 2025
Teaching Assistant – <i>Dept. of Statistics – University of California, Riverside</i>	2021 – 2025
Undergraduate Teaching Coordinator – <i>Dept. of Mathematics – University of Arizona</i>	2018 – 2020
Undergraduate Teaching Assistant – <i>Dept. of Mathematics – University of Arizona</i>	2017 – 2018

TEACHING (* – indicates at least some redevelopment of course curriculum)

Lecturer (VAP) – <i>Dept. of Statistical & Data Sciences – Smith College</i>	2025 – present
• <u>SDS 192:</u> Introduction to Data Science (x2, Fall 2025, tentative)	
• <u>SDS 270:</u> Programming for Data Science in R (x1, Fall 2025, tentative)	
Associate Instructor – <i>Dept. of Statistics – University of California, Riverside</i>	2023 – 2025
• <u>STAT 011:</u> *Introduction to Statistical Modeling (x2, Fall 2023, Spring 2024)	
• <u>STAT 107:</u> Statistical Computing (x2, Summer 2023, 2024)	
• <u>STAT 127:</u> *Quality Improvements (x2, Winter 2023, 2024)	
• <u>STAT 130:</u> *Sampling Surveys (x1, Fall 2024)	
• <u>STAT 170:</u> Regression Analysis (x1, Summer 2025)	
Teaching Assistant – <i>Dept. of Statistics – University of California, Riverside</i>	2021 – 2025
• <u>STAT 008:</u> Statistics for Business (x2, Spring 2022, Winter 2025)	
• <u>STAT 010:</u> Introduction to Statistics (x5, 2021 – 2025)	
• <u>STAT 011:</u> Introduction to Statistical Modeling (x3, 2021 – 2025)	
• <u>STAT 107:</u> Statistical Computing (x2, Summer 2022, Winter 2025)	
• <u>STAT 130:</u> Sampling Surveys (x2, Fall 2021, 2022)	
• <u>STAT 208:</u> Statistical Data Mining Methods (x1, Spring 2025)	

Undergraduate Teaching Coordinator – Dept. of Mathematics – University of Arizona	2018 – 2020
• <u>MATH 100/100A</u> : Math Lab (Prep. for College Mathematics) (x4, 2018 – 2020)	
Undergraduate Teaching Assistant – Dept. of Mathematics – University of Arizona	2017 – 2020
• <u>MATH 100/100A</u> : *Math Lab (Prep. for College Math.) (x2, Fall 2017, Spring 2018)	
• <u>MATH 223</u> : Vector Calculus (x1, Spring 2020)	
• <u>MATH 396T/DATA 367</u> : *Sports Analytics (x3, 2018 – 2020)	

SCHOLARLY RESEARCH

Dissertation – University of California, Riverside (Advisor: Dr. Zhe Fei)	2025
• <u>Title</u> : ImgKnock: Knockoffs for Image Data via Latent Representation Learning	
• Developed and applied a refined knockoffs procedure on image data through latent representation learning	
• Applied 2 nd -Order Group Knockoffs and ImgKnock approaches on fundus images for glaucoma	
Thesis – Honors College – University of Arizona (Advisor: Dr. Joseph Watkins)	2020
• <u>Title</u> : “Legitimate or Unfair?: An Evaluation and Improvement of the College Football Playoff Using Logistic Regression and Adjacency Matrices”	
• Developed and refined a ranking procedure for choosing the best college football teams through logistic regression	

PUBLICATIONS

Bouris E., Levya B.K., Odugbo O.P., Lawson J. , Jin S., Fei Z., Morales E., Alkhalili O., Caprioli J. <i>A Vision Transformer Model for the Detection of Early Glaucoma from Optic Disc Photographs</i> . Under revision at Medical Image Analysis.	(in review) 2025
Lawson J. , Fei Z. <i>ImgKnock: Novel Knockoff Inference for Image Data via Latent Representation Learning</i> .	(in prep.) 2025
Lawson J. , Watkins J. <i>Legitimate or Unfair?: An Evaluation and Improvement of the College Football Playoff Using Logistic Regression and Adjacency Matrices</i> . University of Arizona Campus Repository. Available from: https://repository.arizona.edu/handle/10150/651357	2020

STUDENT RESEARCH PAPERS & PROJECTS

Student – Dept. of Statistics – University of California, Riverside	2020 – 2025
• Statistical Applications in Crime Mapping: Exploring the Impacts of Weather on the Occurrence and Location of Car Thefts in the City of Phoenix (2023)	
• Winning Time: The Rise of Stochastic Processes in Tennis (2022)	
• A Classification Study on Rafael Nadal’s Match Results (2022)	
• Boston Housing: Incorporating Spatial Dependency to Understand Housing Values (2022)	
• An Introduction into Elo Ratings (RShiny App) (2022)	
• Analyzing Hypertension Risk among the Population through Survival Analysis (2021)	

Student – Dept. of Mathematics – University of Arizona**2016 – 2020**

- Inhibition of Non-Homologous End-Joining for DNA Repair: A Modeling Approach (2020)
- Real-Time Classification of Atrial Fibrillation using RR Intervals and Transition States (2019)
- Investigation into a New, Reliable Estimator for the Survival Function (2018)
- Statistical Research on UA Men's Golf Team (2018)
- Statistical Analysis on UA Women's Soccer Team (2017)

SCHOLARLY PROGRAMS & INTERNSHIPS

Participant – University Teaching Certificate (UTC) Program – UC Riverside**2025**

- Learned and developed useful pedagogical techniques for use in statistics classes

Participant – JumpStart – UC Riverside (Advisor: Dr. Subir Ghosh)**2020**

- Investigated the usefulness of the sufficient statistic and its usage in sampling

Participant – REU@UNCW – UNC Wilmington (Advisor: Dr. Yishi Wang)**2019**

- Implemented classification methods to detect onset of atrial fibrillation with ECG data

Participant – RUSIS (REU) – Oregon State University (Advisor: Dr. Javier Rojo)**2018**

- Investigated usefulness of a new estimator for the empirical survival function

Student – MATH 396T (Sports Analytics) – University of Arizona**2017**

- Ran statistical analyses on soccer passing patterns; correlations between scoring

Intern – KinetX Aerospace – Tempe, AZ**2017**

- Developed several Python scripts to project trajectories in diff. coordinate planes

KNOWLEDGE & SKILLS

Research Interests

- High-dimensional variable selection, signal and image processing, sports analytics, machine learning, artificial intelligence, environmental and ecological statistics

Mathematics & Statistics Knowledge

- Machine learning, classification methods, generalized linear and mixed effects models, Monte Carlo methods, varying-coefficient models, probability theory, knockoffs

Coding and Technology Skills

- R, Python, MATLAB, Java, LaTeX, Bash, HTML, SQL, Microsoft Office, Zoom, ArcGIS

MENTORING

Mentor – SMART Program – University of California, Riverside**2023 – 2025**

- Topics: Insurance premiums, sports analytics, dentistry
- Students: Cameron Fong (2023), James Liao (2024), Shawn Hwang (2025)

Mentor, TA – MATH 396T, DATA 375 (Sports Analytics) – University of Arizona**2018 – 2020**

- Topics: Regression modeling with golf, serve data in tennis, strength and conditioning
- Students: Edwy Cai (2018), various students (2019 – 2020)

Team Leader – Blue Chip Leadership Program – University of Arizona**2018 – 2019**

- Provided guidance for up to 15 freshmen while discussing basics of social leadership

- Advised first-year mentees on academic/social situations during fall semester

SERVICE

Committees

- Diversity, Equity, & Inclusion (DEI) Committee – Stat. Department, UCR (2022 – 2024)
- Women in Data Science (WiDS) Event Committee – UCR (2023)
- Southwestern Undergrad. Mathematics Research Committee (SUnMaRC, 2018 – 2019)
- Blue Chip Serves – Blue Chip Leadership Program – University of Arizona (2017)

Clubs & Associations

- Statistics Mini-Graduate Student Association – UCR (multiple positions; 2020 – 2025)
- MathCats – UofA (multiple positions; 2016 – 2020)
- Blue Chip Leadership Program – UofA (2016 – 2020)
- Blue Chip Serves – Blue Chip Leadership Program, University of Arizona (2017)

Volunteering

- Tutor: K-12 Refugee Ed. Services – Lutheran Social Services of Southwest (2016 – 2020)

Outreach

- Panelist: Data Science Program Recruit. Event – CNAS, UCR (2025)
- Panelist: Graduate Student Panel for Recruit. Day – Stats. Dept., UCR (x3, 2023 – 2025)
- Host: Booth for UCR Statistics at Highlander Day (x4, 2023 – 2025)
- Moderator: NISS Graduate Student Panel (2023)
- Panelist: DS-PATH Summer Fellowship Program, UCR (2023)

AWARDS, HONORS, & ENDORSEMENTS

Student – Dept. of Statistics – University of California, Riverside**2020 – present**

- Graduate Student Travel Award: Departmental (x1, 2025)
- F.N. David Rising Scholar Award: Departmental (x1, 2025)
- SMART Mentor Award: Departmental (x3, 2023 – 2025)
- DEI Student Committee Member: Departmental (x2, 2023, 2024)
- Outstanding TA Award: Departmental (x1, 2023)
- Chancellor's Distinguished Fellowship: University-wide (x1, 2020)

Student – Dept. of Mathematics – University of Arizona**2016 – 2020**

- Academic Year Academic Distinction: University-wide (x3, 2017 – 2020)
- Dean's List: University-wide (x7, 2017 – 2020)
- Best Poster: MATH 485 Poster Session (x1, 2020)
- UArizona Leadership Endorsement: University-wide (x1, 2020)
- 3rd Best Undergraduate Oral Presentation: RMSC at UNCG Greensboro (x1, 2019)
- The Richard Pierce Memorial Scholarship Endowment: (x1, 2019)
- Galileo Circle Scholar: College-wide (x1, 2019)
- Academic Year Highest Academic Distinction: University-wide (x1, 2019)
- Dean's List with Distinction: University-wide (x2, 2018, 2019)
- McLean First Generation Scholarship Award: (x1, 2018)
- Wildcat Excellence Award: (x1, 2016)

CONFERENCE PARTICIPATION

Joint Statistical Meetings – <i>Nashville, TN</i>	2025
• <u>Speed Talk & Poster:</u> ImgKnock: Novel Knockoff Generation and Feature Selection for Image Data via Latent Representation Learning	
Data Science in the Classroom Conference – <i>Riverside, CA</i>	2025
• <u>Poster:</u> ImgKnock: Novel Knockoff Generation and Feature Selection for Image Data via Latent Representation Learning	
Graduate Student Symposium – <i>University of California, Riverside</i>	2025
• <u>Poster:</u> ImgKnock: Novel Knockoff Generation and Feature Selection for Image Data via Latent Representation Learning	
Orange County Biostatistics Symposium – <i>Irvine, CA</i>	2022
NISS Graduate Student Research Conference – <i>online</i>	2021
• <u>Presentation:</u> Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States	
Joint Statistical Meetings – <i>online, originally for Philadelphia, PA</i>	2020
• <u>Poster:</u> Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States	
15th UNC Greensboro Regional Mathematics & Statistics Conference – <i>Greensboro, NC</i>	2019
• <u>Presentation:</u> Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States	
MATH REU Conference – <i>Clemson, SC</i>	2019
• <u>Presentation:</u> Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States	
Southwestern Undergraduate Mathematics Research Conference – <i>Tucson, AZ</i>	2019
• <u>Presentation:</u> Investigation of Estimators for the Case of Non-Decreasing Ratio of Cumulative Hazards	
Southwestern Undergraduate Mathematics Research Conference – <i>Albuquerque, NM</i>	2018

OTHER POSTERS & TALKS

ImgKnock: Novel Knockoff Generation and Feature Selection for Image Data via Latent Representation Learning	(x3) 2025
Statistical Applications in Crime Mapping: Exploring the Impacts of Weather on the Occurrence and Location of Car Thefts in the City of Phoenix	2023
Real-Time Classification of Atrial Fibrillation using RR Intervals and Transition States	(x3) 2020 – 2021
• <u>Locations:</u> UNC Wilmington Poster Session; Graduate Student Seminar (x2)	
Inhibition of Non-Homologous End-Joining for DNA Repair: A Modeling	2020
Investigation of Estimators for the Case of Non-Decreasing Ratio of Cumulative Hazards	2018
Statistical Research on the University of Arizona's Men's Golf Team	2018
The University of Arizona Women's Soccer Presentation	2017

MEMBERSHIPS

American Statistical Association	2024 – present
Mu Sigma Rho – University of California, Riverside	2023 – present
American Mathematical Society	2018 – 2019
