

# Jericho Lawson

Curriculum Vitae – Jan. 2026

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## EDUCATION

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

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## EMPLOYMENT

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

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

- Lecturer (VAP) – *Dept. of Statistical & Data Sciences – Smith College*** **2025 – present**
- SDS 192: Introduction to Data Science (x3, Fall 2025, Spring 2026)
  - SDS 270: Programming for Data Science in R (x2, Fall 2025, Spring 2026)
- Associate Instructor – *Dept. of Statistics – University of California, Riverside*** **2023 – 2025**
- STAT 011: \*Introduction to Statistical Modeling (x2, Fall 2023, Spring 2024)
  - STAT 107: Statistical Computing (x2, Summer 2023, 2024)
  - STAT 127: \*Quality Improvements (x2, Winter 2023, 2024)
  - STAT 130: \*Sampling Surveys (x1, Fall 2024)
  - STAT 170: Regression Analysis (x1, Summer 2025)
- Teaching Assistant – *Dept. of Statistics – University of California, Riverside*** **2021 – 2025**
- STAT 008: Statistics for Business (x2, Spring 2022, Winter 2025)
  - STAT 010: Introduction to Statistics (x5, 2021 – 2025)
  - STAT 011: Introduction to Statistical Modeling (x3, 2021 – 2025)
  - STAT 107: Statistical Computing (x2, Summer 2022, Winter 2025)
  - STAT 130: Sampling Surveys (x2, Fall 2021, 2022)
  - STAT 208: Statistical Data Mining Methods (x1, Spring 2025)

**Undergraduate Teaching Coordinator – Dept. of Mathematics – University of Arizona****2018 – 2020**

- MATH 100/100A: Math Lab (Prep. for College Mathematics) (x4, 2018 – 2020)

**Undergraduate Teaching Assistant – Dept. of Mathematics – University of Arizona****2017 – 2020**

- MATH 100/100A: \*Math Lab (Prep. for College Math.) (x2, Fall 2017, Spring 2018)
- MATH 223: Vector Calculus (x1, Spring 2020)
- MATH 396T/DATA 367: \*Sports Analytics (x3, 2018 – 2020)

**SCHOLARLY RESEARCH**

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**Dissertation – University of California, Riverside (Advisor: Dr. Zhe Fei)****2025**

- Title: 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<sup>nd</sup>-Order Group Knockoffs and ImgKnock approaches on fundus images for glaucoma

**Thesis – Honors College – University of Arizona (Advisor: Dr. Joseph Watkins)****2020**

- Title: “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**

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Bouris E., Levya B.K., Odugbo O.P., **Lawson J.**, Jin S., Fei Z., Morales E., Alkhalili O., Caprioli J. *A Vision Transformer Model for the Detection of Early Glaucoma from Optic Disc Photographs*. Under revision at Medical Image Analysis.

**(in review) 2025**

**Lawson J.B.**, Fei Z. *ImgKnock: Knockoffs Feature Selection for Image Data via Latent Representation Learning*. UC Riverside. ProQuest ID: <https://www.proquest.com/LegacyDocView/DISSNUM/32238972>. Retrieved from <https://escholarship.org/uc/item/77403004>

**2025**

**Lawson J.**, Watkins J. *Legitimate or Unfair?: An Evaluation and Improvement of the College Football Playoff Using Logistic Regression and Adjacency Matrices*. University of Arizona Campus Repository. Available from: <https://repository.arizona.edu/handle/10150/651357>

**2020****STUDENT RESEARCH PAPERS & PROJECTS**

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**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**

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**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**

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**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, GitHub, MATLAB, LaTeX, Bash, HTML, SQL, Quarto

**MENTORING**

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**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**

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### **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**

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### **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

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<b>Joint Statistical Meetings – <i>Nashville, TN</i></b>	<b>2025</b>
<ul style="list-style-type: none"><li>• <u>Speed Talk &amp; Poster</u>: ImgKnock: Novel Knockoff Generation and Feature Selection for Image Data via Latent Representation Learning</li></ul>	
<b>Data Science in the Classroom Conference – <i>Riverside, CA</i></b>	<b>2025</b>
<b>Graduate Student Symposium – <i>University of California, Riverside</i></b>	<b>2025</b>
<ul style="list-style-type: none"><li>• <u>Poster</u>: ImgKnock: Novel Knockoff Generation and Feature Selection for Image Data via Latent Representation Learning</li></ul>	
<b>Orange County Biostatistics Symposium – <i>Irvine, CA</i></b>	<b>2022</b>
<b>NISS Graduate Student Research Conference – <i>online</i></b>	<b>2021</b>
<ul style="list-style-type: none"><li>• <u>Presentation</u>: Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States</li></ul>	
<b>Joint Statistical Meetings – <i>online, originally for Philadelphia, PA</i></b>	<b>2020</b>
<ul style="list-style-type: none"><li>• <u>Poster</u>: Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States</li></ul>	
<b>15<sup>th</sup> UNC Greensboro Regional Mathematics &amp; Statistics Conference – <i>Greensboro, NC</i></b>	<b>2019</b>
<ul style="list-style-type: none"><li>• <u>Presentation</u>: Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States</li></ul>	
<b>MATH REU Conference – <i>Clemson, SC</i></b>	<b>2019</b>
<ul style="list-style-type: none"><li>• <u>Presentation</u>: Real-Time Classification of Atrial Fibrillation using RR Intervals/Transition States</li></ul>	
<b>Southwestern Undergraduate Mathematics Research Conference – <i>Tucson, AZ</i></b>	<b>2019</b>
<ul style="list-style-type: none"><li>• <u>Presentation</u>: Investigation of Estimators for the Case of Non-Decreasing Ratio of Cumulative Hazards</li></ul>	
<b>Southwestern Undergraduate Mathematics Research Conference – <i>Albuquerque, NM</i></b>	<b>2018</b>

## OTHER POSTERS & TALKS

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<b>ImgKnock: Novel Knockoff Generation and Feature Selection for Image Data via Latent Representation Learning</b>	<b>(x3) 2025</b>
<b>Statistical Applications in Crime Mapping: Exploring the Impacts of Weather on the Occurrence and Location of Car Thefts in the City of Phoenix</b>	<b>2023</b>
<b>Real-Time Classification of Atrial Fibrillation using RR Intervals and Transition States</b>	<b>(x3) 2020 – 2021</b>
<ul style="list-style-type: none"><li>• <u>Locations</u>: UNC Wilmington Poster Session; Graduate Student Seminar (x2)</li></ul>	
<b>Inhibition of Non-Homologous End-Joining for DNA Repair: A Modeling</b>	<b>2020</b>
<b>Investigation of Estimators for the Case of Non-Decreasing Ratio of Cumulative Hazards</b>	<b>2018</b>
<b>Statistical Research on the University of Arizona's Men's Golf Team</b>	<b>2018</b>
<b>The University of Arizona Women's Soccer Presentation</b>	<b>2017</b>

## MEMBERSHIPS

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

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