

LIAM J. RYAN

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Biomechanics specialist with multiple years of experience supporting force plate systems and applied performance testing in elite-level performance organizations, including professional baseball. Background includes sport-specific measurement system development, motion capture integration, and independent applied baseball analytics using public tracking and biomechanics datasets.

TECHNICAL SKILLS

- Biomechanics: Force plates, data quality control, performance testing workflows, sport-specific measurement systems, motion capture integration
 - Analytics: Python, R, SQL
 - Biomechanics Data: Exploratory analysis using OpenBiomechanics (Driveline) datasets
 - Other: Conversational Spanish
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PROFESSIONAL EXPERIENCE

Kistler Instrument Corp. - Novi, MI

Application Specialist, Biomechanics | Jun 2023 - Jan 2026

- Oversaw North American force plate operations in elite sport performance and research environments
- Implemented and troubleshoot performance testing workflows to ensure valid, reliable data collection
- Led development of sport-specific measurement solutions, including baseball-focused applications (instrumented mound/batter's box)
- Optimized installations with emphasis on motion capture integration
- Member: Society for American Baseball Research (SABR), American Baseball Biomechanics Society (ABBS)

Sales Operations Engineer, Industrial Production | Jan 2022 - Jun 2023

- Provided technical application support for force and pressure sensors in manufacturing systems
 - Conducted cost and revenue analysis supporting cross-functional partnership decisions
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INDEPENDENT BASEBALL ANALYTICS & RESEARCH

- Analyze Statcast and FanGraphs data using Python, R, and SQL to explore performance trends and year-to-year changes
- Evaluate swing speed distributions, contact point proxies, and batted-ball tendencies to contextualize offensive output
- Develop reproducible workflows for data cleaning, feature extraction, visualization, and reporting
- Explore public biomechanics datasets to build familiarity with time-series variables and sequencing concepts
- Focus on evaluating rookie performance and estimating WAR production within debut seasons

Selected projects: liam-ryan.netlify.app

ADDITIONAL EXPERIENCE

Michigan State University Football - East Lansing, MI

Student Equipment Manager (Head Student Manager, Final Season) | 2018 - 2021

- Supported daily operations for a Power 5 football program, coordinating practice and gameday logistics across coaching, performance, athletic training, nutrition, and operations staff
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EDUCATION

Michigan State University

Bachelor of Engineering, Applied Engineering Sciences (Supply Chain Management)- Dec 2021