

Liam Jennings

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Education

Robert Morris University, Moon Township, PA
Master of Science in Applied Data Science
Bachelor of Science in Statistics and Data Science

GPA: 4.00
Expected Graduation: May 2025
Minor in Sport Management

Projects

The Wrong Stuff – CMSAC Fellow

Jul 2024 - Present

- Develop visualizations depicting 4-seam fastball horizontal and vertical movement against whiff rate, xwOBA, and Stuff+ to emphasize the importance of horizontal movement over vertical movement in pitch success
- Constructed six random forest models (for each year) predicting Stuff+ and xwOBA and compared variable importance to understand how the five physical characteristics impact each metric

Cincinnati Reds Baseball Analytics Hackathon Finalist

Jan 2024 - Feb 2024

- Led a team of three students to implement regularized regression to determine which of 12 advanced, Statcast, and batted ball statistics are significant in predicting fielding-independent pitching (FIP)
- Created a decision tree model with 10-fold cross-validation using 7 significant variables from regularized regression to select three pitchers who could benefit from a role change

Cleveland Cavaliers Hackathon Advanced Analytics Track Winner

Nov 2023

- Teamed with another student to web-scrape six variables to tier the Cavaliers' schedule based on popularity using a k-means clustering algorithm and presented findings in a way for all audiences to understand

Work Experience

Carnegie Mellon Sports Analytics Camp (CMSAC) Fellow

Jun 2024 – Present

Carnegie Mellon University

- Learned 15 machine learning techniques and statistical methods such as random forests, general additive models, and regression analysis and applied to data such as ball-flight characteristics from Statcast
- Collaborated on two group research projects about WNBA Exploratory Data Analysis and bias in Stuff+

Data Collection Analyst

Jul 2023 – Present

PFF

- Collect pre-snap, post-snap, penalties, and location stats for every play during a game (~180 plays)
- Work up to 3 live games (~12 hours) on game day with a team of 12 people on different processes

IT Application Programmer

Feb 2023 – Present

Robert Morris University IT Department

- Build 2 reports per hour in Argos using SQL queries based on requests from 15 administrators

Leadership and Activities

President/Co-Founder

Apr 2023 – Present

Sport Analytics Club, Robert Morris University

- Founded to lead monthly coding workshops and meetings and host guest speakers for over 40 members
- Pioneered first annual “Data Jam” using marathon survey data from P3R and data from LEARFIELD with 34 participants from Robert Morris University, University of Maryland, and Penn State University

Key Skills

Industry Skills: R, Python, SQL, Tableau, SPSS, Microsoft Power BI, Microsoft Excel, Machine Learning, Deep Learning, Statistical Modeling, Predictive Modeling, Data Visualization, Data Analysis, Data Mining