Liam Jennings

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Education

Robert Morris University, Moon Township, PA   GPA: 4.00
Master of Science in Data Science   Expected Graduation: May 2025
Bachelor of Science in Statistics and Data Science   Minor in Sport Management

Projects

The Wrong Stuff – CMSAC Fellow   Jul 2024 - Present
• Developed visualizations depicting 4-seam fastball movement against whiff rate, xwOBA, and Stuff+ to emphasize the importance of horizontal movement over vertical movement in pitch success
• Constructed 6 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 3 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
• Partnered with another student to web-scrape 6 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 them 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
• Collected pre-snap, post-snap, penalties, and location stats for every play during a game (~180 plays)
• Worked up to 3 live games (~12 hours) on game day with a team of 12 people on different processes

IT Application Programmer   Feb 2023 – Feb 2024
Robert Morris University IT Department
• Built 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 the club to lead monthly coding workshops and conduct meetings for more than 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