

Kushal Shah

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RESEARCH EXPERIENCE

Optimizing Pass/Run Ratios based on Game Context | Feb 2020 |

[GitHub Link](#)

- Created a random forest model to suggest the optimal play based on the game situation, **predicting a successful play 89.2% of the time.**
- This presentation finished **3rd in the SU Football Blitz Challenge**

A Poisson Betting Model with a Kelly Criterion Optimizer for European Football | May 2020 | [GitHub Link](#)

- This paper will be presented at the **2021 MIT Sloan Sports Analytics Conference.**
- Best Undergraduate Paper** at the **2021 Academy of Economics and Finance Conference**
- Created a betting model for European Football that used Machine Learning and a self-made Kelly Criterion Optimizer
- This paper was presented at the **2020 Midwest Sport Analytics and 2020 Carnegie Mellon Sport Analytics Conference**

Advanced Real Plus Minus for Soccer | May 2020 | [GitHub Link](#)

- Lead a project to create a metric that evaluated Premier League players accounting for the strength of opponents and teammates.
- The paper received an **honorable mention** at the **2020 CMSAC Reproducible Research Competition**
- This paper was presented at the **2020 Midwest Sport Analytics Conference and Carnegie Mellon Sport Analytics Conference**

Defining Offensive & Defensive College Basketball Player Positions | September 2020 | [GitHub Link](#)

- Lead a project that used Model-Based Clustering, Random Forests, and Logit Models to accurately define positions to maximize team success
- Predicted an overall **70% of games correctly** for March Madness from 2008 to 2018
- This paper was presented at the **2020 Midwest Sport Analytics Conference and Carnegie Mellon Sport Analytics Conference**

Trench Warfare: Creating and Analyzing Defining Defensive Line Positions | July 2020 | [GitHub Link](#)

- Redefined Defensive Line Positions with a Hierarchical Clustering and Random Forest approach
- Made use of a variety of methods, including a Ridge Regression, to analyze these redefined positions
- Received an **honorable mention** by [Sports Info Solutions](#)

WORK EXPERIENCE



Scouting Director | SU Women's Basketball

 Syracuse, NY | Sept 2018 – Present

- Lead a group of students to create detailed, data based, scouting reports for coaches

Founder and President | SU Soccer Analytics Club
Project Coordinator | SU Basketball Analytics Club

 Syracuse, NY | Sept 2018 – Present

- Conduct meetings and oversee a group of students to conduct data centric research projects related to soccer
- Founder of twitter account [@CuseAnalytics](#) and the [Syracuse Sport Analytics Website](#) as platforms to share student work
- Leading a research project to identify if “momentum” exists in the NBA and its impact.



Football Operations Game Research | XFL

 Remote | October 2019 – March 2020

- Analyzed NFL and XFL game film recording in game statistics and time related data to recognize the impact of rule changes

SKILLS

- Extremely Fluent in using **R** and **R Studio**
- Adept with the use of complex **Machine Learning Modelling Techniques**
- Proficient in using **SQL** and **Python**
- Expert in the use of **Microsoft Office Applications**
- Extremely Adept with **Tableau**

EDUCATION AND HONORS

Masters of Science
Applied Data Science

Syracuse University

- Current GPA: 4.0
- Graduation: May 2022

Double Major; Bachelor of Science
Sport Analytics and Economics

Syracuse University

- Current GPA: 3.9
- Graduation: May 2021
- [Falk](#), Founder's, Success, and Berlin Scholar
- Dean's List Fall 2018 – Present

