Kushal Shah

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RESEARCH EXPERIENCE

Clustering Attacking Possessions to Value Different Play Styles for Soccer | May 2020 (On Going) | Thesis
- A machine learning approach to identify play style for different possessions in Soccer

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.
- This paper was selected to be presented as a paper at the 2020 Midwest Sport Analytics Conference
- The paper received an **honorable mention** at the 2020 CMSAC Reproducible Research Competition

Defining Offensive & Defensive College Basketball Player Positions | September 2020 | GitHub Link
- Lead a project that used model-based clustering and random forests 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 selected to be presented as a paper at the 2020 Midwest Sport Analytics Conference
- This paper was also accepted for the 2020 CMSAC Reproducible Research Competition

A Poisson Betting Model with a Kelly Criterion Optimizer for European Football | May 2020 | GitHub Link
- Created a betting model that made use of a Poisson distribution along with a Kelly Criterion Optimizer to manage the bankroll
- The model yielded a **119.48% profit overall**.
- This paper was selected to as a poster at both, the 2020 Midwest Sport Analytics Conference and at CMSAC 2020
- This paper has also advanced into the 2nd round for the 2021 MIT Sloan Sports Analytics Conference.

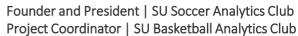**Trench Warfare: Creating and Analyzing Defining Defensive Line Positions | July 2020 | GitHub Link**
- Participated in SIS's 2020 Football Analytics Challenge where we analyzed defensive lineman using play by play data
- Our definition of defensive line positions was mentioned in SIS's article that highlighted some of the better submissions

WORK EXPERIENCE

Scouting Analyst | SU Women's Basketball
📍 Syracuse, NY | Sept 2018 – Present
- Develop detailed 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 research projects related to soccer
- Founder of twitter account @CuseAnalytics and the Syracuse Sport Analytics Website as platforms to share student work
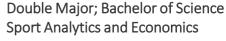- Leading a research project to identify if "momentum" exists in the NBA and its impact.

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**
- Proficient in using **SQL** and **Python**
- Expert in the use of **Microsoft Office Applications**
- Advanced experience with **Tableau** and **Tableau Prep**
- Bilingual - **English** and **Hindi**
- Adept with the use of complex **Machine Learning Modelling Techniques**

EDUCATION AND HONORS

Double Major; Bachelor of Science
Sport Analytics and Economics
Syracuse University
- Current GPA: 3.9
- Graduation: May 2021
- Founder's, Success, and Berlin Scholar
- Dean's List Fall 2018 – Present

Masters of Science
Applied Data Science
Syracuse University
- Current GPA: 4.0
- Graduation: May 2022