Kushal Shah

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RESEARCH EXPERIENCE

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

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

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

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

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