Capstone Proposal:

Enhanced win/lose betting percentages in European Soccer based on team formation

Domain Background:

Sports Betting Industry base their betting odds based on team performance. More realistic odds would provide proper value.

Problem Statement:

Win/Lose Percentage is usually based on recent team performance and historical encounters between teams. The objective of this project is to develop an algorithm that takes other factors into perspective, focusing on team selection and lineup in matches.

Data Sets and Inputs:

This project will use the European Soccer Database available on Kaggle.

This data set should have all the information required for the project.

Solution Statement:

Line-ups and team selections play a huge role in predicting the outcome of any anticipated game. Missing players in key positions in the formation may alter any expected results. Thus determining these key players in each position that greatly influence the final results, would help get a better and more accurate results.

Benchmark Model:

The project will use the available data of the betting odds available in the same data set to use as a benchmark to measure the efficiency of the developed algorithm.

Evaluation Metrics:

The Results will be represented in Win/Draw/Lose Percentage similar to the percentages usually provided by Sports betting companies

Project Design:

The solution will be developed in several steps.

First the key players in each position will be identified based on their contribution to the game. As a starting point, the consider will only consider games won/drawn/lost as the main factor for getting this job done.

In a later phase, the algorithm could get more into details by rating the players based on their direct contribution, such as goal scored, assists, goal conceded etc.

This information will then used to enhance the percentages provided by the betting agencies to provide better insights and proper predictions