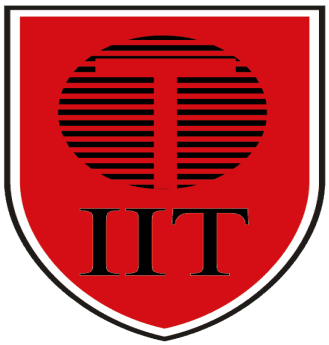

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Positioner – Player Position Suggestion for Rugby Using XGBoost

A Dissertation by

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Abstract

Rugby union is a high-contact team sport that calls for a variety of physical skills from its participants. Several studies have emphasized the physical distinctions between playing positions, however, there are no studies or commercially available products that suggest the optimal positions for players based on their physical and technical characteristics.

The aim of this study was to identify the differences in physical and technical characteristics in rugby players according to their playing positions and then develop a product which rugby players and other users can make use of in order to help them achieve their goals.

This study made use of the Python Machine Learning model, XGBoost, to help with the suggestion of player positions based on the attributes the user inputs. The model achieved a respectable accuracy rate of 91% using player traits such as, weight, height, speed, agility, endurance and upper and lower body strength.

Subject Descriptors: Multi-label Classification

Keywords: Rugby Player Position Requirements, Rugby Player Position Prediction, Physical and Technical Characteristics, XGBoost, Classification Model