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LIST OF ABBREVIATIONS

AutoML	R tool used to run the forester model
xG	Expected Goal
GUI	Graphical User Interface
ML	Machine Learning
AI	Artificial Intelligence
XAI	Explainable Artificial Intelligence
XGBOOST	Extreme Gradient Boosting
LightGBM	Light Gradient Boosting
CatBoost	Categorical Boosting
ranger	Specialized Random Forest model
SVG	Scalable Vector Graph

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ABSTRACT

The expected goal provides a more representative measure of the team and player performance which also suits the low-scoring nature of football instead of the score in modern football. The score of a match involves randomness and often may not represent the performance of the teams and players, therefore it has been popular to use alternative statistics in recent years such as shots on target, ball possessions, and drills. To measure the probability of a shot being a goal by the expected goal, several features are used to train an expected goal model which is based on the event and tracking football data. Finding public datasets with the desired features is a scarcity. Using scraping techniques and requests to find data that can be used to fit into our model. Investigate the type of data used and pre-process the data filtering out the own goals which create an outlier in the model. This report presents a Web app of expected goals model made from collecting 315,430 shots from different leagues around the world. We Test and Analyze our model based on an AutoML tool, Forester which is mainly used for tree-based classifications. Our Random Forest model which gave us an accuracy of 0.939 has been integrated into an interactive web app using TensorFlow Js and Shiny Js. xG model can be used in prediction of future goals and for fantasy football.