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"CRICKML"
Player Performance Prediction in Cricket

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Abstract

Cricket is one of the fastest growing and one of the most popular sports in the world. The primary objective of any team that is playing a Cricket match is to win. However, Cricket is a very dynamic sport and there are multiple variables at play at any given moment in a Cricket match and for a team to win, they must make a series of important decisions. One of the most important decisions a team must make is to decide their playing combination. However, the various internal and external factors that must be analyzed about players before making any decision makes it a challenging task. Additionally, the increase in popularity, competitiveness and financial aspect of Cricket has made this task tougher.

In recent years, the team selection process has become a very public and a controversy filled ordeal. The selection process is a manual procedure which involves Ex-Cricket players and Cricket analysts. It is mainly based off personal intuition and biases which makes the output of the procedure debatable. Cricket has long missed an evidence-based selection process, which the officials involving in the procedure can use to make decisions.

This project proposes CrickML, a player performance prediction system that uses data mining and machine learning concepts to accurately predict the performances of players in an upcoming match or a tournament. The CrickML processes the capability to analyze players in multiple perspectives to learn about their skills and weaknesses in multiple playing conditions which can then be used for predictions. The CrickML is also built in with a custom hybrid model that uses multiple machine learning models to make accurate predictions.
The insights that can be generated using CrickML has the potential to be highly relevant and useful to any official who is in the decision-making process or even the Cricket coaches and players. CrickML addresses the evidence-based selection process that has long been missing from the game of Cricket.
This dissertation discusses the approaches and the technologies that is used in developing CrickML.