

Predicting an Optimal Sri Lankan Cricket Team for ODI Matches According to the Nature of the Game

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Abstract -This paper focuses on predicting an optimal Sri Lankan cricket team for One Day International (ODI) matches according to the nature of the game. In general, the team selection process in ODI is based on performance measures such as batting and bowling averages. These measures have several numbers of limitations. The number of runs scored by batsmen and wickets taken by bowlers serves as a natural way of quantifying the performance of a cricketer. However, the factors such as scoring runs against a strong bowling line-up or delivering a brilliant performance against a team with a strong batting line-up, etc. deserves more credit. In this paper, we present a new method of prediction by scanning the dependencies applied in the game such as the average performances of the players, the ground, the opposition team and the match outcome. Due to the complexity in the data set in size and the dimension, and analysis required, advanced analysis techniques such as Clustering and Association Rule Mining has been used to predict the players. The study concludes by predicting teams (eleven players per each match) for thirty-five matches played in between 2013-2018. The final outcome shows that the Sri Lankan cricket team can win the match with 88% by predicting players using our system.

Keywords: Association Rule Mining, Clustering, Cricket, Game conditions