

Categorizing T20 cricket grounds

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T20 cricket matches are played by all cricket playing countries. There are more than 80 grounds in various countries on which these games are played. It is hypothesized that some of these grounds favor batsmen while others favor bowlers, or some grounds are high-scoring while others are low-scoring. In this research work, we perform a statistical analysis to determine whether those grounds can be categorized based on the past data. Numerous factors can be considered for the analysis. Main factors we have been considering are the total runs scored in both innings, humidity level, gust, wind, air pressure and the temperature at the grounds when the matches are played. Cluster analysis was used in investigating and determining the number of categories.

This study helps identify the behavior of the T20 cricket grounds all over the world and thus enables one to predict the winning possibilities.

Data were collected through Cricinfo website from 84 cricket grounds throughout the world. Ward's method of Hierarchical cluster analysis, which is a major statistical method used in determining the relatively homogeneous clusters, was used.

We found that grounds can be clustered into 3 clusters according to the coefficients of the Wards linkage table. When we consider the countries in which these grounds are located, there is no evidence to conclude that grounds in some specific countries are belonging to a particular category. For example there are grounds in India belonging to all three categories.

SPSS statistical software was used in this analysis to categorize the grounds. The research work is being carried out to identify how cluster changes with different factors.

Keywords: Cricket grounds, Cluster analysis, Hierarchical cluster analysis, Gust