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Categorizing T20 batsmen based on their performances

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T20 Cricket is the most popular shortest form of cricket which is played all over the world. It is obvious that some of the T20 batsmen are power hitters. Some of them are having higher averages and higher strike rates. The aim is to categorize the batsmen who are showing similar performances. In this research work, we perform a statistical analysis to categorize batsmen in the world based on their performances shown during the T20 matches that they have played. Several factors have been considered in our analysis namely, highest score scored by a batsmen, average, strike rate, number of 4s scored, number of 6s scored and number of half centuries scored. Cluster analysis was used in determining the number of clusters into which the batsmen should be clustered. This study helps identifying the batsmen who are showing the highest performances in T20 cricket. It enables one to predict the range of runs scored for the batting inning if a team is set with these batsmen and also it is useful to rank the batsmen. Data were collected through Cricinfo website from 58 T20 batsmen throughout the world. Analysis was done to identify the relatively homogeneous clusters, using Ward's method of Hierarchical Cluster Analysis using SPSS statistical software and R-Studio. When considering the performances shown by the batsmen, there is no enough evidence to conclude that the batsmen who are showing the highest performances belong to one country or continent. When all the variables are considered together, Mohammad Shahzad, MJ Guptil, BB Macullum, TM Dilshan, and DPMD Jayawardene can be categorized as the batsmen showing the best performances in T20 while CH Gayle, MJ Guptil, BB Macullum, MEK Hussey, Najibullah Zadran, KP Pietersen, F du Plessis have both the highest batting averages and strike rates. It can be concluded that MJ Guptil and BB Macullum are the two batsmen showing the best performances in all forms of T20 cricket. The research helps to identify how cluster changes with different factors.

Keywords: Cluster analysis, hierarchical cluster analysis, K-means, T20 batsmen