Authors suggest that finding the rising stars(RSs) within the domains is of great importance as the organizations can put efforts in betterment and expertise of the RS. Rising star is an emerging player who could become a star in future based on the consistent performance.

The authors have put forward the concept of co-players who play with the RS as it is an essential factor for the rising star prediction in cricket. Three features are defined namely, co-batsmen, team, opposite team for batsmen and similarly co-bowlers, team, opposite teams for bowlers. Total 9 features for the RS in batsmen and 11 features for RS in bowling domain have been considered.

Multiple Machine learning algorithms have been used and four most appropriate have been used for binary classification. Generative classifiers outperform the others. The RSP is made with high accuracies and rankings are compared with the ICC rankings of 2013-2016 players. Basic terminologies and concepts of the game of crickets are also elaborated.

Among the generative models, Bayesian Network(BN) and Naïve Bayesian (NB) are used. Support Vector Machines (SVM) and Classification and Regression Tree (CART) are used in the discriminative models. For the feature evaluation, authors have used the state-of-the-art evaluators information gain, gain ratio and chi-squared statistics. The weighted average of the batsman and bowler is calculated and then their performance is evaluated. Statistical analysis of each feature is shown for their data. The authors used 10 fold cross validation for training and to validate the classifiers for using their datasets of each domain.

In batting domain, highest accuracy achieved was 87.5%, 87.3%, 84%, 78% using BN, NB, CART, SVM on the first dataset. Even the second dataset shows the highest accuracies of 89%, 88%, 80%, 73% fir CART, BN, NB, SVM for the same feature.

In bowling domain, the highest accuracies are 80%, 78.8%, 78.5% and 78.5% by applying SVM, NB, CART and BN using their first dataset and 77.8%, 75%, 74% and 72% accuracies for BN, CART, SVM and NB classifiers using the other dataset.

Category wise and model wise analysis is done and the rankings of ICC are compared with the predictions.

The authors have discussed the existing methods to find the rising stars and the pros and cons of the methods are discussed. The datasets and the evaluation of the performances are described too. Open challenges and the future scope is discussed towards the end.

Methods for finding Rising stars in Bayesian Networks are sub categorized into four: Ranking methods, Prediction Methods, Clustering Methods, Analysis Methods.

Earlier published papers using these methods are discussed and their improvements done later as discussed. Findings and Limitations of multiple publications and their dataset are stated and the scope of improvement among those is described. Basically the authors state that collaborations with renowned researchers can also lead to a rising future.

Similarly, all the methods in Bayesian networks are discussed, their earlier works, best works and future scopes are mentioned. Applications of finding rising stars in other domains like community question answering networks, sports networks, telecommunication networks are elaborated with relevant works in those fields. Datasets of academic networks and miscellaneous networks are specified with the main features of all the datasets.

Challenges like falsely predicted rising stars, using multiple data sources, applications in multiple domains, long term prediction impacts and many other challenges and future directions are discussed in brief.