**Abstract**

  Social networks have acquired much attention recently, largely due to the success of online social networking sites and media sharing sites. In such networks, rigorous and complex interactions occur among numerous one-of-a-kind entities, main to massive statistics networks with notable enterprise capacity. Community detection is an unsupervised learning task that determines the community groups based on common interests, occupation, modules and their hierarchical organization, using the information encoded in the graph topology. Finding communities from the social network is a difficult task because of its topology and overlapping of different communities. In this research, the Girvan-Newman algorithm based on Edge-Betweenness Modularity and Link Analysis (EBMLA) is used for detecting communities in networks with node attributes. The twitter data of the well-known cricket player is used right here and community of friends and fans is analyzed based on three exclusive centrality measures together with a degree, betweenness, and closeness centrality. Also, the strength of extracted communities is evaluated based on modularity score using proposed method and the experiment results confirmed that the cricket player’s network is dense.