

## **Graph-based Community Detection in Social Network**

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Nowadays, online social networking sites have become very popular around the world. Among them, twitter is one of the most useful networks for many users. Online users want to share their emotional states and attitudes about various features and events by using these networks. Community detection is a key aspect of research field until now. Likewise, we have still a crucial problem for detecting the communities in an efficient and effective way. So, we will propose the framework to find the communities by using the graphs. In previous studies, researchers discovered the communities in undirected networks. This system will discover the communities in directed network. Sentiment community detection in twitter network may be beneficial for detecting like-minded and densely connected users. In this system, while community detection will use link partitioning method and sentiment analysis will use three classifiers for reducing neutral values of tweets and for calculating sentiment values of emoticon tweets. We expect this framework will be a systematic framework for detecting the communities with sentiments of tweets using graphs in directed network.