## Community detection in Facebook with outlier recognition

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Communities among users play the popular role for days of Social Network and the presence of groups of nodes that are high tightly connected with each other than with less links connected to nodes of different groups. So community detection algorithms are come to be the key to detect the user who are interact with each other in social media. However, there are still challenges in considering of some nodes have no any common node within the same group as well as some nodes have no any link to the other node. It can be used similarity measure based on neighborhood overlapping of nodes to organize communities and to identify outliers which cannot be grouped into any of the communities. In this paper, we detect communities and outliers from Edge Structure with neighborhood overlap by using nodes similarity. The result implies the best quality with modularity measurement which leads to more accurate communities as well as improved their density after removing outliers in the network structure.