Hybrid Hierarchical Clustering Approach for Community Detection in Social Network

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Abstract : Social Networks generally present a hierarchy of communities. To determine these communities and the relationship between them, detection algorithms should be applied. Most of the existing algorithms, proposed for hierarchical communities identification, are based on either agglomerative clustering or divisive clustering. In this paper, we present a hybrid hierarchical clustering approach for community detection based on both bottom-up and bottom-down clustering. Obviously, our approach provides more relevant community structure than hierarchical method which considers only divisive or agglomerative clustering to identify communities. Moreover, we performed some comparative experiments to enhance the quality of the clustering results and to show the effectiveness of our algorithm.