A fast algorithm for overlapping community detection

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Author(s)

Mostafa Elyasi ; Mohammadreza Meybodi ; Alireza Rezvanian ; Maryam Amir Haeri

Abstract:
Nowadays, the emergence of online social networks have empowered people to easily share informatior of social networks with similar users and their friends form community structures of networks. Uncoverin networks plays an important role in network analysis with many applications such as finding a set of exp common activities, finding a set of similar people for marketing goals, to mention a few. Although, severa detection have been presented in the literature, online users simultaneously interact with their friends ha to join more than one group at the same time which leads to the formation of overlapping communities. T realize a realistic analysis of networks. In this paper, we propose a fast algorithm for overlapping commu the first phase, the Louvain method is applied to the given network and in the second phase a belonging of belonging matrix determines how much a node belongs to a community. Finally, some of the found co modularity measure. The performance of the proposed algorithm is studied through the simulation on the proposed algorithm outperforms several well-known overlapping community detection algorithms.

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Authors

Mostafa Elyasi