Community structure in a network plays an important role in understanding its characteristics and functioning. In a social network, community structures represent closely knit groups of people, and are vital to understand and analyze the network as a whole. The network is described by a graph with nodes representing the entities and the edges representing connections between these entities. Very recent of community detection algorithms, is a method that relies on optimization of a parameter called modularity [1], which is an indication of the partition of a network into communities. Another significant article in this regard is [2] by Santo Fortunato and Marc Barthélemy, which brings out that optimizing modularity on large networks fails to resolve small communities, even when they are well defined. In the present article, irregularities in the mathematical formulation of modularity are addressed and the author proposes an improvised procedure for community detection. The approach suggested is based on Modularity maximization but modified in the sense that the algorithm is applied in a recursive manner on the network until all sub-communities within the communities are identified. The improvised algorithm results in a better community structure with all distinct community structure
clearly spelt out.

References

7. Stanford Large Network Dataset Collection: Epinions Social Network

Index Terms

Computer Science Security

Keywords

Probability Estimate, Recursive BGLL, Qsingle ,Qpair