**Abstract**

 The detection of the community structure in big complex networks is a promising field of research with many open challenges. Community sub graphs are characterized by means of dense connections or interactions amongst its nodes. Community detection and evaluation is a critical venture in graph mining. A spread of measures had been proposed to evaluate the nice of such groups. Community sub graphs are characterized via dense connections or interactions amongst its nodes. In this paper, it evaluates groups primarily based on the okay-center idea, as a method of comparing their collaborative nature belongings no longer captured by way of the single node metrics or by the installed network evaluation metrics. This subgraphs specializes in the maximal ok-center set of rules for deriving sub-agencies from a sports activities man or woman’s community and uses subgraph measure for comparing the sub-groups. The sub graph measures which include total degree k-core, in-degree k-core, out-degree k-core, and transitivity are used. Primarily based at the k-core, which basically measures the robustness of a community beneath degeneracy, it extends to weighted graphs, devising a novel concept of k-cores on weighted graphs.