

Abstract

Twitter, facebook and plurk is a great social network which has members up to millions of members. The representation of social network makes a large graph with so many nodes. Each node has a relationship of friendship to several other nodes, thus increasing the value of the node *degree* centrality. This value of centrality represents the level of popularity / influence of this nodes to other nodes. But the problem, this representation is not so relevant if it only involves *degree* centrality as parameter in its computation. Centrality value will be more relevant if it includes the weight of the relationship, thus forming a weighted graph. Analysis and implementation of *degree* centrality measurements on weighted graph is done using the method introduced by Kretschmer. Kretschmer methods not only take the *degree* as *degree* centrality parameter measurements, but also involves weights on each of their relationships, so that the value of centrality becomes relevant to the reality on social networks, where every friendship is always has a level of familiarity (weights).

What will be done in this paper was to analyze and implement Kretschmer method in the social network twitter, once to perform a simulation of centrality measurement of twitter data. The direction of this study was to test the Kretschmer method in centrality measurement if applied to the case of social network twitter. This study uses a system within consists of preprocessing, centrality measurement and visualization process. In the analysis phase, the results of measurements of the system were then analyzed based on the change of variables that influence it. While at this stage of simulation, twitter data is entered into the system to measure centrality and then visualize it in a graph form.

Keywords: *Social* Network Analysis, twitter, *degree* centrality, weight, Kretschmer method.