

## Abstract

Social Network Analysis is a set of methods to investigate aspects of the relationship in the social structure. Broadly speaking, social network analysis leads to the process of social network analysis deals with the form and structure of the entity interaction patterns in it. In knowing the structure and patterns of interaction that occurs in a network, we can represent the network into a graph. For example, the social networking Twitter. Each user will be described in a node and each relationship between nodes is described in an edge. Following/ Followed, Mentions, Retweets, Mentions Relations of social networks Twitter can describe the popularity / influence of the Twitter users. Value / weight of this relation is also called centrality. Centrality value of a node will be greater if we include the weight of relation between nodes, and also do not just count the centrality of the node, but also include the value of centrality of the neighboring nodes. Eigenvector centrality method gives a relative value to all nodes in the network based on the principle that the node with the highest centrality values of nodes that have a large value of eigenvector centrality where the value of the eigenvector centrality of a node also depends on the value of the eigenvector centrality of the node's neighbors .

In this research there are two types of tests. For the first test aims to measure the centrality each user and analyze the effect of changes in the weights Follow, Mentions and Replies relations. For the second test aims to measure the ability of the system to measure the value of centrality in the test data using eigenvector centrality which would then be visualized in the form of graphs. With this method of eigenvector centrality, centrality values can be relevant in accordance with the conditions of the social networking user to determine the most popular or most influential social networking.

**Keywords:** *Social Network Analysis, eigenvector centrality, centrality, follow, mentions, replies.*