

## **Abstract**

*The development of technology for the collection and storage of data causes the stack of data very much. Given that many data sets, creating a need to be able to utilize the data. Utilization data is of course intended to get important information from the data patterns are formed. The process to obtain information or patterns from a collection of valuable data is called data mining. Classification is one method of data mining. One well-known classification algorithms are K-nearest neighbor (kNN). KNN algorithm is very simple, works based on the shortest distance from the query instance to the training sample to determine its kNN and easy to implement. One of the problems in the kNN algorithm is the same effect of all attributes in calculating the distance between new documents and documents that are available in training data, there are probably some of the attributes that are less important to the process of classification and some attributes are more important. In this research we will use K-Nearest Neighbor Algorithm Based Association (KNNBA) to overcome the shortcomings of the kNN, where the KNNBA of each attribute are given different weights by using the method of association rules. In the final project using six datasets that have different characteristics. From the results of testing and analysis shows that the association can improve the accuracy of kNN by using the parameters of minimum support and minimum confidence appropriate to the type of data attributes.*

**Keywords:** *Data mining, classification, K-nearest neighbor, K-Nearest Neighbor Based Association, association rules, support, confidence*