Abstract

Several techniques are applied to the unsupervised clustering data analysis. The entered data is dataset of input without a class of answer. Besides, the beginning weight and the values of cluster groups of answers are defined. However, the most important parameter among these three factors (unsupervised clustering, weight, and the number of clusters) is the determination of beginning weight for the system. If the weight is well determined after the starting point, the system will be able to calculate track and figure out the answers more rapidly and precisely. Therefore, this paper proposes the method to optimize the weight of the system by conducting a technique of computational intelligence to manage the unsupervised clustering data analysis. The experiment starts from finding the value of beginning weight and then it is processed later by using sample datasets from UCI Machine Learning Repository including iris, balance and wine. The result shows that the efficiency of data classification increases to 99.3%, 83.6% and 47.0%, respectively, and finding automatically the initial number of cluster k. Consequently, the outcome reduces the number of predicting clusters to discover approximate answer as well.

References


**Index Terms**

Computer Science  
Artificial Intelligence

**Keywords**

Weight Optimize  
Unsupervised Clustering  
Computation Intelligence