

## Abstract

In this paper we propose a new approach for document clustering based on Cuckoo Search and K-means. Due to the random initialization of centroids, cuckoo search clustering can reach better solution but the number of iterations may increase drastically. In order to overcome this drawback, we propose to replace this randomness by k-means at the beginning step. The effectiveness of the proposed approach was tested on the benchmark extracted from Reuters 21578 Text Categorization Dataset and the UCI Machine Learning Repository. The obtained results show the efficiency of the new approach in term of reducing the number of iterations and fitness values. Furthermore, it can improve the quality of clustering measured by the famous F-measure