Abstract

The access to relevant information from a big data container is gaining immense significance. This depends on storage technics and the organization level. This work proposes an intelligent linear data structure with an integrated cognitive agent reorganizing periodically the data structure content. The reorganization is based on a confidence interval of a random variable estimated by the agent. This random variable represents the demand frequency for each element. The cognitive agent studies the client behavior and puts most popular data in the beginning of the array in order to be found quickly. That increases considerably the search algorithm performance and solves by that one of most problems of the big data field. Models and algorithms in this work are implemented with Java programming language and simulated and that proves the reliability of the approach.
Intelligent Linear Data Structure with Self Performance Optimization Capacity: Application on Big Data

References


Index Terms

Computer Science

Artificial Intelligence
Keywords

Data Structures  Big Data  Statistic Modelling  Algorithms and Computational Complexity  Auto-adaptive Systems

High Performance Systems.