Applications of the digital image data mining based on the Hadoop cloud platform

Yi Zhang

School of Computer Science Engineering, Jiangsu University of Science and Technology, Jiangsu Zhenjiang 212003, China

156750508@qq.com

Abstract

The Hadoop cloud platform is an important data resource management method of modern science and technology applications. Its applications to the modern data resource collection can increase the security of data applications, enhance the data controllability and expandability, realize comprehensive applications of SQL statements and Hadoop cloud platform in the data image resource application management, guarantees the accuracy of data application management and distribution, and boosts further development of modern science and technology in terms of corporate resource applications and development.

Keywords

Hadoop cloud platform; data image and data mining; practice and exploration.

1. Introduction

With the gradual improvement of China's science and technology, technological applications and development have gradually become an important channel for resource application management of Chinese enterprises, safeguarding both accuracy and security of information data transmission. The Hadoop cloud platform is an efficient data transmission approach developed on the Internet cloud platform. It can help China's computer techniques play a greater role in the modern social development, especially in terms of ensuring security and quality of data transmission.

2. Hadoop cloud platform

2.1 Concept of the Hadoop cloud platform

As a data processing software based on the modern Internet technical environment, the Hadoop cloud platform has a greatest difference from other data document processing in that the former conducts distributed processing of data documents. [1] The document processing of the Hadoop cloud platform deepens the application degree of documents during the document processing process, enhances the stability of document processing and expands the data storage quantity and processing speed of data resources. All in all, the Hadoop cloud platform conducts data resource management based on the traditional big data mining. Compared with the traditional resource management of data mining and processing, it shows a high reliability, a low cost, a high efficiency and a high fault-tolerance. [2]

2.2 Characteristics of the Hadoop cloud platform

The major space operation platform of the Hadoop cloud platform is in the virtual world of the computer, and both the data resource application management and the data transmission have clear logging management data. Therefore, the reliability of its data resource application management is high, which promotes the scientific development of China's modern data resource management. The development and applications of the Hadoop cloud platform relies on the basic computer software in the Internet for comprehensive processing. Its exploration and development degree of the computer data is low and the cloud space is a virtual data space, which calls for no economic input of data storage, thus saving the space and economic cost of the corporate data resource management. The high efficiency and the high fault-tolerance of the Hadoop cloud platform mean that multiple subprograms operating on the Hadoop cloud platform can screen data according to corresponding

data conditions in the data resource application management, thus promoting the combined operation of different subprograms. Besides, once subprograms on the Hadoop cloud platform show run-time errors, the Hadoop cloud platform can quickly end these wrong programs and re-analyze the data of subprograms, thus guaranteeing the normal operation of data mining and output on the Hadoop cloud platform.

3. Application design flow of digital image data mining based on the Hadoop cloud platform

3.1 Design concept

The digital image data mining is a new-type data resource management method based on the traditional data application management. [3] The Hadoop cloud platform conducts distributed management of data resources through the data resource transmission management. The digital image data mining based on the Hadoop cloud platform can integrate data prediction, data analysis and data resource classification, thus realizing efficient and high-quality development of the modern data resource management and operation.

3.2 Design of different system parts and their correlation

The application programs of the digital image data processing based on the Hadoop cloud platform mainly include selection of the digital resource value, digital input, digital output and digital image transmission. [4] First, in terms of selection of the digital resource value, the operation and development of the Hadoop cloud platform relies on a complete set of SQL statements, and the modern Internet data resource mining also has certain data processing language. To realize digital image data mining based on the Hadoop cloud platform should first select data resources before data input. In this way, the language setting of the Hadoop cloud platform can form perfectly-integrated operation programs, realizing consistent management of data resources. Second, in terms of data input, the digital image data mining on the Hadoop cloud platform can conduct data resource collection according to corresponding data conditions set by the data resources. On the one hand, the useful information can be maintained and the data resources can be classified based on the data resource distribution. On the other hand, the Hadoop cloud platform can further classify data resources according to the data models obtained through the digital image data mining, and further collect data resources, thus guaranteeing the clarity and rationality of data applications in the data resource processing and management. Third, in terms of data output, the digital image data mining on the Hadoop cloud platform can conduct distributed processing of data resources based on clients' data demand program. The dual data resource processing can increase the accuracy of the data resource, thus guaranteeing the quality and stability of client's data resources and boosting further development of data in the Internet information resource transmission. Fourth, in terms of data image transmission, the major role of the data resource analysis and collection on the Hadoop cloud platform is to form a complete data resource information data base and meet the demand of the corporate information resource processing. The Hadoop cloud platform can conduct data image enhancement and compression of data resources according to the data resource distributed management. It can improve the intuitive characteristics of data applications. The data image can also increase the accuracy of data application and data proofreading, realizing the practical significance of the data image data mining under the Hadoop cloud platform.

The Hadoop cloud platform can conduct data resource collection and processing according to the data resources input by clients, thus increasing accuracy of management standards for the data resource application. On the one hand, the Hadoop cloud platform can ensure the periodicity of the data resource collection and operation, quickly find out wrong programs on the Hadoop cloud platform and improve the reasonable operation of data resource application management in the data distributed processing. On the other hand, during the data resource application management, the data image of different layers shows different colors. According to the color contract in images, it can conduct the

analytical hierarchy process of data. For example, the data image formed on the Hadoop cloud platform can highlight some of its details. [5]

4. Practical applications of the digital image data mining based on the Hadoop cloud platform

4.1 Pre-stage preparation for operation on the Hadoop cloud platform

The pre-stage preparation for the data resource operation on the Hadoop cloud platform refers to the distributed management of data resources. In this paper, data resources application management is divided into characteristics of Group A and Group B. The data resource analysis is conducted of Group A and the data image output image is conducted of Group B. Management of the two groups of data resources can further upgrade the data resource application management degree, and then conduct data resource operation.

4.2 Practical operations of the image data mining on the Hadoop cloud platform

Data of Group A and Group B undergo the data mining and data resource hierarchical management, respectively. First, the two groups of data undergo data resource input so as to guarantee data completeness in the two groups of data applications. According to different data output requirements of the two groups, different run commands on the Hadoop cloud platform are set. On the Hadoop cloud platform, data adopts the SQL for data resource processing. The data resources to which the two data groups are corresponding undertake the large volume data resource operation and management. The Hadoop cloud platform conducts data model processing and maintenance. Second, the two groups of data undergo data resource output management. Data analysis resources and original data resources are compared with each other to further develop the data resource application management programs. At last the Hadoop cloud platform transfers the data platform into the data image, and finishes the periodical operation of the data resource application management through the data resource compression, data resource recovery and other forms of data processing.

4.3 Post-stage data monitoring on the Hadoop cloud platform

The Hadoop cloud platform will verify and test output data resources and data images, respectively. The demonstration forms of the data resource results of the two groups show diversified applications of the Hadoop cloud platform in the modern data resource analysis, and that the Hadoop cloud platform can guarantee accuracy of data images to predict and analyze data mining in the modern information resource applications; promote the development of the modern information resource application and management level; and upgrade the professional and scientific degree of Internet techniques being applied to the modern data resource management.

5. Conclusions

With the further development of China's modern social and economic development, applications of modern techniques in China have been strengthened. The data image data mining on the Hadoop platform can conduct differentiated management of the singular data mining model and immediately re-distribute wrong programs generated by the data transmission. This can guarantee accuracy and security of the resource application and management in the Internet data management environment, and promote innovational applications of China's modern information techniques.

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