Establishment of an Open Information Platform for the National Sports Center in China

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Abstract

In recent years, digital public services have evolved rapidly, garnering significant attention within the socio-cultural domain, particularly in the sports sector. A pivotal concern is how to effectively consolidate and disseminate public digital sports resources that are distributed nationwide. Addressing this, our study proposes the architectural design and pivotal technologies for a nationwide public digital sports resource sharing cloud service platform. This platform is specially tailored for the National Sports Center, aiming to enhance the digital engagement of the sports community and promote the open sharing of digital sports resources. By focusing on the sports context, we explore the interaction design principles of an online sports research public service platform from an academic research perspective, aimed at enriching the digital sports experience. Furthermore, we delve into the dynamics of sports communication in the era of big data, analyzing its characteristics, and the internal and external forces influencing these dynamics. The establishment of a robust public data open information platform for the National Sports Center is examined, highlighting the challenges and opportunities it presents for sports communication. This is posited as an effective strategy to navigate the evolving landscape of sports communication in the contemporary era.

Keywords: Big Data, Cultural Communication, Sports, Digital Cultural Experience.

Introduction

Over the last two decades, the rapid development of information technology has catalyzed profound transformations in the creation and dissemination of knowledge, significantly impacting various sectors, including sports. This technological evolution has introduced the "knowledge payment" wave, a novel educational model lauded for its innovative approach to learning. This model has been particularly instrumental at the National Sports Center, promoting an effective environment for athletes and sports professionals to enhance their skills through targeted educational programs (Dale, Kato, & Wischusen, 2020). However, this shift raises critical questions about the autonomy of knowledge and its integrity within the sports domain. There is a growing concern whether the commercialization of sports education could compromise the quality and depth of sports knowledge, transforming it into a commodity influenced heavily by market dynamics rather than its intrinsic value (Yan, 2016).

The advent of the internet has dramatically reshaped human interactions, altering the social structure and introducing new dynamics in sports education and communication. Traditionally, sports training and education were predominantly delivered through institutionalized settings (Tian, 2022). However, with the widespread availability of online platforms, there has been a paradigm shift from traditional "teacher-centered" methods to a "learner-centered" approach. Today, athletes and sports students can select from a plethora of online courses offered by top trainers from around the globe, challenging the traditional monopoly of sports academies . This decentralization in the educational sphere, exemplified by the National Sports Center's adoption of online sports education platforms, allows for a broader and more democratic dissemination of sports knowledge. While this has led to increased competition among educational providers, it also democratizes access to high-quality training, enabling a wider range of individuals to benefit from elite sports knowledge(Zhang & Li, 2022). As we move forward, the role of technology in sports education will continue to evolve, likely leading to more open and accessible platforms that not only enhance the learning experience but also ensure that high standards of sportsmanship and expertise are maintained. This transition towards a more inclusive and technologically integrated sports education system underscores the critical need for a balanced approach that respects both the tradition and innovation in sports knowledge dissemination (Chen, 2012).

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The Current State of Cultural Communication in the Digital Age

Today, as China's public culture is developing, we are eager to promote the inheritance and development of China's traditional cultural system through the "content + software + application" approach. How to build a public cloud service of digital culture is a key link to enhance the construction of public culture in China (Yan, 2011). With the rapid development of social economy, the combination of culture and science and technology will promote the development of public culture in China. However, due to the fragmentation of existing literature, major museums, archives and libraries have serious "data silos" phenomenon, and readers who read online have unclear information requirements, and the public's reading experience is also poor. 2020, the "14th Five-Year Plan "In 2020, the 14th Five-Year Plan will incorporate the national "cultural data" system into the 13th Five-Year Plan, and establish a "national big data" public service platform. To establish a Chinese "quality" information sharing platform, to build a "digital" "aggregation" of China, and to provide an "all-round" "culture" for the new era. "It provides an "all-round" "one-stop" for the "culture" of the new era. Under the guidance of the National Federation of Cultural Data Industry, the National Cultural Data Industry Association has begun to develop relevant national standards, laying a good foundation for the interconnection and sharing of research and cultural data from all regions of the country.

At present, there are more complete information technology in China and internationally. European Library Project EDL has integrated a large amount of cultural materials for more than 20 public organizations in Europe, providing them with the business of resource sharing. OCLC enables different libraries to upload their catalogs on World Cat's cloud-based platform, thus achieving the purpose of information sharing (Chen, 2018). Today, with the rapid development of information technology, the massive amount of information has put new demands on our public culture. The Library of Congress has launched a national digital library program called "American Memory" to provide easy access to public reading materials, and WDL has built a virtual library based on the Internet. Japan's National Diet 'NDIL' has developed a new search service that integrates the information resources of Japan's national public cultural organizations and provides a comprehensive information search service. The Korean National Digital Library Project has enabled the effective integration and sharing of digital cultural information in Korea. A number of scholars in China are also exploring the sharing of public digital culture. Xie Xiaoyi discusses the current issues arising in the construction of public culture in China, and offers some countermeasures and opinions on the digital construction of the national library in particular (Xie, 2010). Yan Chunzi discussed the fundamentals of public cultural information resources integration from the construction of public cultural service platform (Yan, 2016). Huang Yan discussed the demand and provision of public cultural resources from the construction of public cultural service system (Yan, 2011). Chen Shun conducted an in-depth research on the construction of digital libraries in Fujian Province and discussed the construction of cloud computing technology support system and application services (Chen, 2012). Wanyan Deng proposed a Web 3.0-based digital resource integration system, which contains a distributed information source layer, a semantic integration layer, a resource management organization layer, and an application service layer to integrate and manage resource information (Wanyan & Dai, 2019). It is mainly discussed the collection sources, collection methods and parsing of data for public cultural information resources. The Opinions on Accelerating the Construction of Modern Public Cultural Service System is a document issued by the General Office of our government and the General Office of the State Council, on the basis of which the integration of public cultural services and science and technology is proposed to be deepened and deepened. With the advent of the mobile Internet era and the rapid development of cloud computing technology, digital information technology and information technology have been gradually integrated into the cloud technology. At present, several provinces and cities in China have launched digital cultural cloud services at provincial, municipal and district (county) levels, and the issue of "public digital cultural cloud" has also attracted extensive attention from the academic community, and some research results have been achieved (Xiao & Wanyan, 2015). It points out that "public cultural cloud" is a new digital public cultural service method that applies modern technology such as Internet, cloud computing and big data to public cultural services. Li Wenchuan and Chen Cheng discussed in depth the innovation history and mechanism of public cloud resources in digital libraries (Li, Chen, & Hu, 2017).

Fan Chunling discusses the role played by cloud technology in building public digital culture from the basic connotation and characteristics of cloud computing (Fan, 2015). Zhu Qinghua provides an in-depth discussion on the characteristics of digital culture cloud services and the innovation of cloud computing

services (Azcárate, 2023; Zhu, 2017). Zhang et al. systematically studied the basic theory of public digital culture cloud service from four aspects, including the connotation and characteristics of public digital culture cloud service, public digital culture cloud service innovation system, public digital culture cloud service model, and public digital culture cloud service innovation strategy (Zhang et al., 2023). It is discussed that the construction of "one-stop" public digital culture service network platform with the case of Guangdong Province E (Post). It provides an in-depth analysis of the characteristics and development of the public digital culture head of Zhejiang "CultureNet". Most of the literature has focused on the research and exploration of the implementation and creativity of public cultural cloud, but the current research has not explored its development path and approach from the perspective of integration and consolidation (Chen & Yin, 2013; Zhang, 2024). Therefore, after an in-depth analysis of the cloud business of public digital culture, a comparison is made between it and conventional public digital culture cloud business, three different types of public digital culture cloud business models are given from three different business approaches of cloud computing, and their implementation approaches are explored from the practical point of view of linking theory to practice, aiming at finding suitable public digital culture cloud for relevant departments business models for cultural cloud construction, with the aim of providing theoretical support for relevant departments to find suitable public digital culture cloud business models.

Digital Culture Communication

"Digital cultural communication" refers to the use of computers as the main carrier, and with the support of multimedia, it can carry out various communications and handle various information exchanges, including capturing, manipulating, editing, storing, exchanging, screening, and printing. With the development of the Internet and the advent of the digital age, people's communication and needs are constantly changing. Geographical dispersion, wide distribution and low creation cost have become a trend of creation. The traditional copyright protection method can no longer meet the public's demand for knowledge acquisition, thus restricting the dissemination of knowledge to a certain extent. Public cultural services refer to public cultural services provided by public institutions or semi-public institutions for citizens, which are mainly aimed at protecting citizens' cultural rights, meeting public cultural needs and improving the overall quality of cultural life in society (Makhloufi et al., 2021). The application of digital technology has greatly improved the supply capacity of public cultural services in China, and the service coverage has been further improved. Digital libraries, cultural information resource sharing, digitization of cultural relics, digitization of broadcasting, film and television, and digitization of press and publishing are the current focus of China's public cultural development.

The first is to realize the digitization of public cultural services; the second is to realize the digitization of public cultural services; and the second is to build an interconnected digital public service platform. Digitization is a major direction in the current development of public culture, and the development of digitization makes digital copyright inevitable. The construction of digital service environment and the digital processing of collection resources are all related to digital copyright, but digital technology has a greater impact on the copyright system, and China's current copyright law has not yet made clear responses to issues such as temporary reproduction, high overlap of reproduction and distribution rights, and the scope of application of technical protection measures, thus causing a conflict between public cultural services and digital copyright. Firstly, the unclear definition of property rights of digital works easily causes copyright crisis in public cultural institutions; digital technology has changed the production and distribution of works, making the copyright enjoyed by authors share with authors, distributors and sellers, but at the same time, it also brings the problem of "unclear ownership" (Jitpaiboon et al., 2013; Zhang & Tian, 2024). When public cultural institutions purchase content resources such as databases, copyright disputes are often exacerbated by the failure of content providers to properly resolve copyright issues. Second, the rights of public cultural institutions to copy and interpret digital works are not clearly defined; browsing, linking and developing digital products are common ways of digital culture, but browsing web pages will result in temporary copying, improper linking will violate the copyright holder's right of dissemination on the Internet, and building their own databases, developing or interpreting digital products will affect the author's copyright or right of information network dissemination. Public cultural institutions often encounter copyright disputes in the process of providing related services, and the rapid expansion and integration of digital copyright contents such as reproduction rights and publication rights make the reproduction and interpretation of digital works increasingly complicated.

Establishment of the National Public Data Information Platform for Cultural Research

National Cultural Research Public Data Information Source

Public cultural services are public-oriented, and it has a great number of data sources, and the data sources are very rich. First of all, there are various data constituted by the services provided by the public, which we call business data. Its business data mainly comes from the institutions themselves (Xie, 2010). For example, when libraries provide services to the public, the basic information such as the number of books in their internal collections and the location of their collections are all commercial data, while in public-oriented services, such as lending information, are also commercial data. In recent years, with the rapid development of information technology, many large public cultural service institutions have set up their own websites online and generated a large amount of information online, which is called "net data". Users' terminal devices such as computers and cell phones, as well as service platforms, and official websites, where users browse and publish information on the official website, are all provided by the Internet. And in the future, the public electronic reading room will be an important service platform which will be an important means for other public cultural service organizations. At the same time, public cultural institutions will also generate a large amount of information in their daily work, which we call "management information" (Fan, 2015). Due to the development of Internet of Things (IoT) technology, which plays a big role in the management of people in institutions, such as access control systems, infrared systems, etc., which can handle information about the flow of people in real time, this new type of management information is also very large. In addition, there exists a variety of data related to public cultural services that are composed of external data where people discuss and study the common contents of public cultural services in various ways, and a huge amount of data is generated as a result.

Technology Model of National Public Data Information Platform for Cultural Research

Digital culture refers to the use of the Internet and big data technology, and the use of digital technology, the Internet, and big data technology, through the Internet, big data technology, through the network, big data technology, innovative, experiential, interactive cultural services and sharing model. "Digital culture for the masses" is a combination of "digital culture", "public" and "digital culture", and to a certain extent, a new kind of culture. To a certain extent, it has realized a new mode of technology operation. Based on "public digital culture," "public digital culture" as the core, "Internet + big data" as the core, and "public digital culture" as the core, we have built a new technology operation model. Based on "public digital culture", we have built a digital "cloud" public service based on "public digital culture" (Wanyan & Dai, 2019). Technically, digital culture public cloud service is a new service model based on cloud computing, and "cloud service" is the core of public digital culture service. According to the service model of cloud computing, public digital culture cloud services can be divided into three categories: IaaS, PaaS and SaaS. On the basis of digital cultural resources, a digital cultural sharing platform is established. The schematic diagram of the public digital culture platform is shown in Figure 1.

1) Public digital culture cloud service model based on IaaS technology: The core of the IaaS-based public digital culture cloud business model is oriented to various public service terminals and visualization devices. For example: touch screens used in libraries, museums, tourist destinations, etc.

2) PaaS service model of digital culture cloud: PaaS-based public cloud service model is based on PaaS, and its core is all kinds of information that can be accessed by all kinds of public libraries and libraries. For example, a complete set of digital libraries and museums.

3) SaaS-based cloud computing service model in digital culture: SaaS-based cloud service model of digital culture is a service model that combines user needs with user demands. For example, some local characteristics of the building.

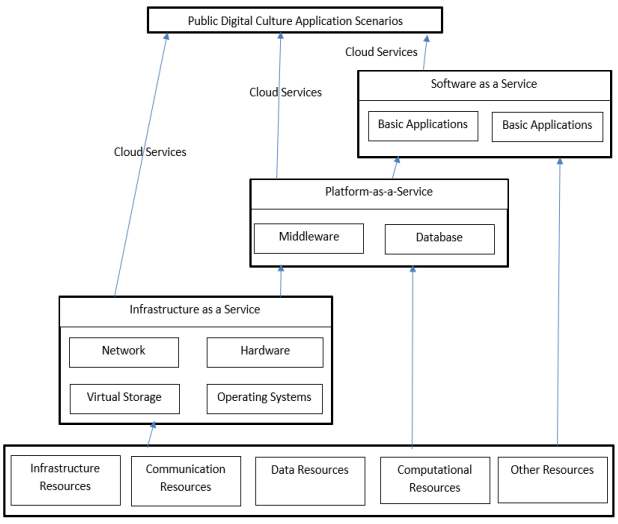

Figure1: Schematic Diagram of Public Digital Culture Platform.

National Cultural Research Public Data Information Platform Construction

Copyright Protection Sub-system Architecture

The establishment of the database should follow the principle of "unified platform, decentralized use, centralized management, and graded consolidation"; data analysis and demand mining: early conversion and gradual progress. By classifying, storing and managing the network tracking data, we can achieve the ultimate goal of tracking and maintaining the rights of enterprises (Zhu, 2017). Based on this, this paper proposes a database structure based on BIS and C/S structure. In the access layer, it mainly realizes a good interaction of human-machine interface such as user interface display, API and application services. The whole process of collecting, editing and flowing data information is realized by using application programs. At the same time, business processing functions such as full-text search and statistical query can be completed according to the user's requirements. Because of the complexity of the data environment in which the system is located; the format of the data information must be marked before proceeding to the next step of the process. The application service layer needs to be able to transmit and process different types of data (Li et al., 2017). The preservation of evidence in copyright protection, the timeliness of forensics, and the correlation analysis of evidence will all be issues that need to be addressed by the infringement forensics system. The data storage layer is a centralized storage for various types of data, such as system information, user information, etc. The system has a long time data storage and query function, and uses a large database and backup mechanism to ensure reliable access to data. Text pre-processing is the processing of text for segmentation, sentence separation, and word separation, etc. The knowledge base based approach classifies keywords, mainly entity index, keyword index, group matching index and specific symbol index. The keywords are identified using statistical methods, high-frequency words are screened, new words are generated, they are entered into the candidate keywords, and then they are output, and finally the keywords are displayed visually.

Data Management Subsystem Architecture

Each module component has its certain application scenario, it is impossible for one component to meet the needs of all business products, and the data subsystem is the same, with its certain limitations and constraints, the common platform design data subsystem will carry the platform internal series of data storage access, such as system data, user routing data, group mapping routing data and so on a number of system internal predefined data. Of course, the function of data subsystem is much more than just providing support for system internal data, it can also provide data services for other business products that meet the conditions. Figure 2 shows the data management subsystem architecture. From the architecture diagram, we can see that the structure of the data subsystem is relatively simple, based on the communication subsystem building blocks of the platform, including data control services, data node services and data agent services constitute the entire data subsystem.

Data central control service: The data central control service is responsible for data registration, destruction, summary information of all data in the subsystem, pressure balance scheduling of data node services and other control functions realized by this service. It is the control core of the whole data subsystem.

Data node: It is the executive body of the real data storage of the data subsystem and is responsible for carrying out data storage access operations. It includes data creation, destruction, data routine operation, addition, deletion, change, etc., and also includes data synchronization.

Data agent: The data agent is introduced to shield the internal complexity of the data subsystem, so that the application service does not need to pay attention to the internal details of the subsystem and provide a friendly and convenient application interface for the subsystem.

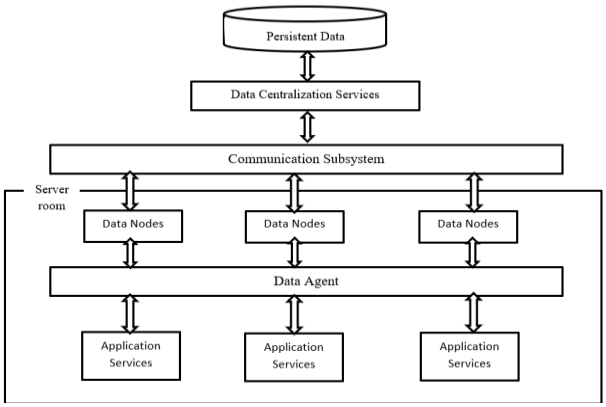

Figure 2: Schematic Diagram of the Data Subsystem Framework.

Data Retrieval Subsystem Architecture

According to the source of documents, they can be classified into two types: hadoop data and oarcle data. hadoop data: text files and non-text files from online disks are stored in hadoop's hdfs or hbase data tables, and website archives of the recommendation system are also stored in hbase tables (Ji & Wu, 2015). These files are indexed by text extraction or text analysis tools such as tika, Jsoup, which store indexable data such as file names, text content, web page content, etc., into the corresponding hbase tables and create indexes quickly using ES-Hadoop, hive, spark big data processing tools together with elasticsearch. New information on the site and site crawlers

are analyzed and then saved in hbase and kafka. The index updater reads the updated data from kafka (Kurdi, 2022).
Oracle data: Oracle data tables store the structured data of the informational system. These data are read directly from oracle data via java programming and indexed using the elasticsearch API. A new interface for indexing Oracle tables, updating table indexes, and deleting table indexes is provided (Tigga, Kannabiran, & Arumugam, 2021).
Search Query Classification

(1) Basic search: In the index building process, different search strategies are generated due to the content of the data and the design of the indexing strategy. Optimal domain matching: In a domain, the maximum score is assigned to the query clause with the most subscripts, and then the query scores of all matching terms are summed up and divided by the number of query clauses to arrive at the total score. The result is that in which documents contain more clauses, and which parts score higher. If a field in a document contains all the entries that best match and no other fields have words matching it; when every other field in the document contains a search term, then that document will score higher than the one before it. The result we really want is the document that best matches all the entries.
Cross-field matching search: The query string will be analyzed to get a list of fields and these fields will be treated as one big field and searched in any field. This approach also raises individual fields during the query process, i.e. when a field has matching content, that field is given more weight than other fields.
Self-voting domain boosting search: Define a document's weighted columns, e.g., the higher the weight of a document when it has been viewed multiple times. During the search process, the value of the document weight field is used to evaluate the search results according to a predefined function.
Phrase query adjustment score search: The query string is first analyzed to generate a list of entries. All entries are searched, but only if they contain all search entries that are adjacent to each other. The maximum distance of words can be set to be adjacent.
Searching using the associative word analysis procedure: When building an index, two neighboring words (or multiple neighboring words) are combined to form an index of associated words. This method is not only more flexible than a phrase query, but also has better performance. Compared to the time spent per search, this query is no less efficient than a simple match, except that there is some loss in the indexing process, because more entries need to be indexed, which means that the domain using this parser will take up more hard disk space.
(2) Pinyin search: Based on the content of the indexed file for classification, a keyword list is created based on the keyword frequency, and a pinyin index is created for the keyword list. When using pinyin search, the most n Chinese words are selected from the keyword index and sorted by word frequency and displayed in a drop-down box for the user to select.
(3) Search word association: Keep all words (phrases) that have been searched for and create sub-word index and pinyin index for them, and set "People's Republic of China" on this basis. Each time a word or a letter is typed in the search field for Chinese characters or pinyin, the n items that best match the index set by the above method will be searched and displayed in the drop-down bar.
(4) Instant search: In the above search method, the user enters the keyword he/she is looking for, clicks a button, or clicks "OK", and then sends a request to the backend to get the search results. Instant search means that each time the user enters a text or words and stays longer than a threshold, the search request is automatically submitted to the backend and the results are sent back, while the cursor is still at the current position of the input box. If the result does not meet the user's requirement, then the search can continue. In the case of phonetic and lexical associations, an instant search is performed to obtain a list of suggested words, and then the first word is automatically searched and a result is displayed without waiting for the user to click "confirm".
Data Visualization Subsystem Architecture

According to the requirements and the actual usage of the software, the system is designed with B/S architecture, and the overall framework is shown in Figure 3 below.

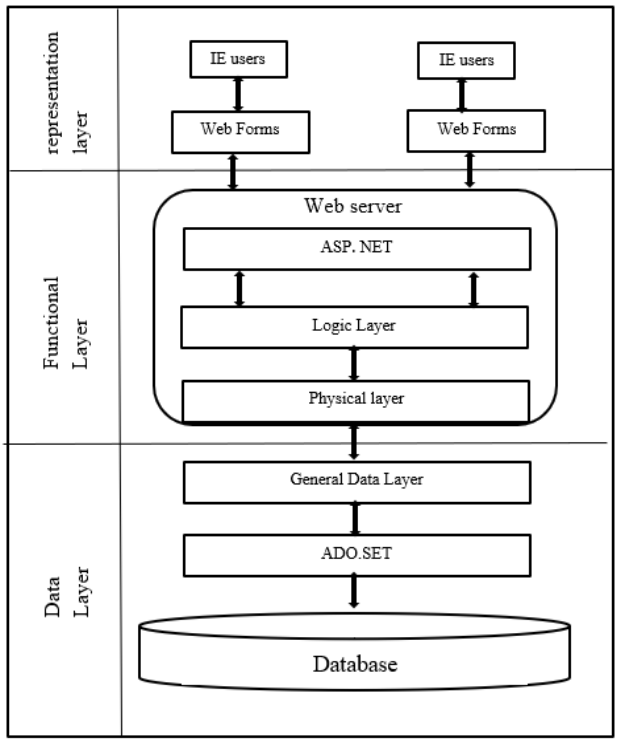

Figure 3: Overall Framework of B/S Architecture.

The data layer uses Acess database with OLE and DOE technology, and ASPNET technology in the function, which can access the database efficiently. And it can generate data copy by XML. to display offline data offline. In the expression layer, Web Serice is used to visualize the acquired data using web protocols and standard data formats. It also has good timeliness, repeatability and strong interoperability, which fully adapts to the development requirements of data visualization.

Data Acquisition Subsystem Architecture

Among them, the collection process of data acquisition is the key to data acquisition, and whether the collected data is rich, accurate and real-time will directly affect the effect of the data processing system in practical application. In order to meet the demand for real-time, efficient and secure data collection services, and drawing on some excellent open source technologies, the whole system will be completed on the basis of Java technology. Among them, the whole platform system consists of five modules: a user-side data collection SDK, which transmits data to the UBT-Collector (Mechanic) server according to a specific policy and according to different network environments. After a series of processing, the server writes this data asynchronously to the Hermes (Kafka) distributed message queue system. In order to correlate the business operation burial points and logs on the business server side, the business server must obtain the user identification (C-GUID) uniformly generated by the customer SDK, and the business server writes the user business operation burial points and log information to the Hermes (Kafka) queue asynchronously in the Hermes (Kafka) queue. Ultimately, all data analysis platforms, which are online or online, are analyzed by the data in Hermes (Kafka). The UBT-Collector system also contains monitoring of the collected data and its own system, writing the monitoring information to the Hbase cluster and implementing real-time monitoring on the Dashboard interface. The architecture of the data collection subsystem is mainly for management, scheduling, and data collection, etc. The main features are.

(1) Redis Cache platform: It is a temporary data storage, such as task queue, process data (status data, list data, etc.). (2) Task Scheduling Center: It is mainly responsible for scheduling tasks to ensure that they are completed within the set time. It also ensures the uniqueness of the task (only one collector can complete it at the same time). (3) Collector: It is mainly designed for handling various tasks. It includes web page download, data structure analysis, task monitoring, etc.

Data Mining Subsystem Architecture

Circulation management is a core work of the public data information platform, which can accomplish the sharing of data resources by providing direct services to the existing data. These digital data are the repository of data collection information.

The data mining system involved in this paper includes three major modules: data pre-processing module, data mining engine module and user interface, as shown in Figure 4 below.

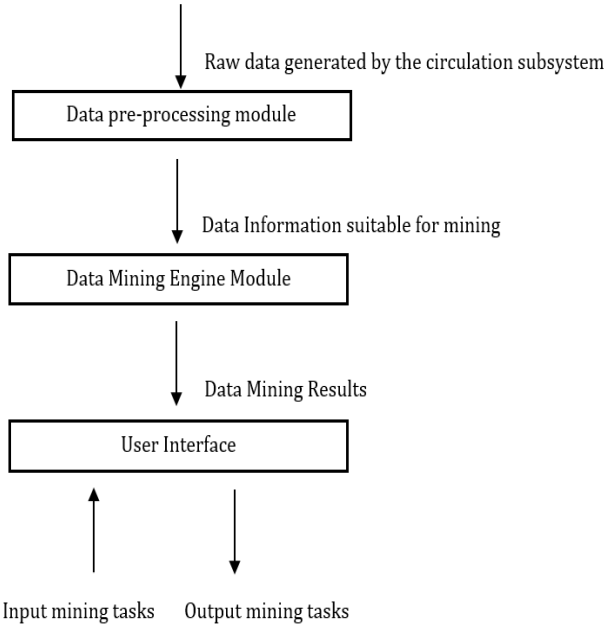

Figure 4: Data Mining Subsystem Architecture.

Data pre-processing module: Data pre-processing is a key part of data mining, which ensures the quality of the data sets needed for data mining. In the mining system of the public data resource sharing platform, the source of resources is the circulation subsystem. The circulation subsystem generates various data forms. The data structure of different data forms varies greatly, and there are problems such as redundancy, incompleteness, and meaninglessness of certain data items, which cause data inaccuracy and are not conducive to data mining, so the data must be preprocessed. Data pre-processing includes two main parts: data cleansing and data alteration. The work done by data cleaning method is to remove sound and irrelevant data from the data set. Incomplete information and wrong number of delineations are processed and duplicate redundant information is removed. The data is simplified as much as possible for better mining.

Data Mining Engine Module: Data mining engine is one of the key technologies of data mining. Based on this, a set of high quality and reliable data can be obtained using data pre-processing methods, and the data can be

mined using appropriate algorithms and related techniques to obtain valuable and accurate mining results. Association rule analysis is one of the most widely used data mining techniques, which includes decision trees, neural networks, association rules, cluster analysis, statistical learning, modal probability sets, and coarse sets.

Correlation rules are used to reveal the correlation between unknown data and to represent the correlation between data using two metrics: support and confidence. The set consisting of the values taken from data segments is called item set, and X and Y are taken as item sets and satisfy X, YElXIY-D, then what about V. Support is the ratio of the number of transactions in item sets k and Y to the number of all transactions, denoted by Supot Xe= Y. The degree of confidence in the probability that the two item sets X and Y occur simultaneously in all transactions, i.e., the ratio of the number of transactions in item sets X and Y to the number of transactions containing X, denoted by CornidenceX1=> Y denotes the probability that the itemset Y occurs at the set of itemsets. The key of association rule analysis is to find the frequent items in the data set by the least support and to generate the associated rules by the least confidence. The problem to be solved by the association rule algorithm is how to find the set of frequent items. Based on this, an Apror algorithm based on breadth-first and a depth-first algorithm based on FP-Tee are proposed.

User Interface: The user interface is an interface that a user enters during the mining process to get the results of the mining. The user interface uses a graphical interface that allows the user to display the results of the data mining in the user's operation. The user interface can be implemented in programming languages such as C and C++.

Conclusion

In conclusion, the development of a nationwide public digital sports resource sharing platform for the National Sports Center is a significant leap forward in harmonizing and enhancing the accessibility of sports data across China. This innovative platform not only addresses the current fragmentation of digital sports resources but also sets a new standard for the integration of technology in sports communication and research. As we look to the future, the platform is poised to revolutionize the way sports information is consumed and shared. Enhanced digital engagement through this platform is expected to lead to increased public participation in sports activities, greater academic contributions to sports sciences, and more informed policymaking that benefits the entire sports ecosystem. The platform will likely become a model for other nations looking to leverage technology in sports administration and cultural promotion.

Moreover, the ongoing evolution of big data and machine learning technologies presents an opportunity for further enhancements to the platform. Predictive analytics could be integrated to offer insights into sports trends, athlete performance, and injury prevention, thereby not only enriching the user experience but also contributing to the advancement of sports science. The establishment of this platform marks the beginning of a new era in sports communication, where data openness and technological innovation lead to a more informed and engaged public. It represents a strategic response to the dynamic changes in cultural communication within the sports industry, ensuring that the National Sports Center remains at the forefront of digital and cultural transformation in sports. As this platform grows and evolves, it will undoubtedly unlock new possibilities for cultural exchange, academic research, and community engagement within the domain of sports.

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