Analysis of the Information System Integration of University Fusion Culture Communication Based on Network Video Automatic Generation Technology

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Abstract:Web services are self-describing and self-contained application modules, which have the advantages of platform independence and programming language independence. Service-oriented architecture is to use the above characteristics of Web services. Its innovation lies in solving the difficulty of manual production of network teaching resources, which is time-consuming, troublesome, long-term, and high-level requirements for teachers. Using this solution, any teacher can record the entire teaching situation and automatically generate two network teaching resources while teaching, which is easy to accumulate into a teaching resource library. The teaching process can be broadcast live on the Internet in real time (including video, audio, computer pictures, etc.). Based on the classic CNN-LSTM structure, the model adds a subject-verb-object classifier to the output of the LSTM network. Subject-verb-object information is the skeleton information of a sentence.

Keywords: Information System Integration, Fusion Culture Communication, Network Vide, Automatic Generation Technology

1. INTRODUCTION

As one of the main contents of my country's education informatization construction, college informatization has achieved great results after more than 10 years of efforts. Support teaching application, scientific research collaboration, resource sharing and electronic school affairs, etc. Digital campus construction [1]. Teaching and financial waste. The educational resource base is the foundation of educational informatization and needs to be built for a long time. In fact, teachers' teaching activities are established and maintained in schools every day [2].

The construction of educational resource library should pay attention to teaching. We hope that teachers of various majors will focus on the scientificity and accuracy of the content, but also be convenient and easy to use. While completing the teaching tasks of this major, the teaching process can be expanded, and can be updated and maintained stably and continuously [3]. Continue to accumulate, automatically generate network teaching resources to accumulate into nursing. According to the data in the tenth annual forecast white paper released by Cisco Systems Corporation (Cisco) in May 2015 [2][3][4], the global Internet video traffic will increase by 4 times in 2019, and traditional culture is a precious commodity in our country. The spiritual wealth of Chinese people not only affects the behavioral habits and ways of thinking of the Chinese people, but also has a great guiding role in personal development and social construction [5].

There are a lot of ideological and political education materials in our traditional culture, and integrating them into the teaching of ideological and political education can not only enrich the content of textbooks, improve the overall integration of the knowledge system and the degree of communication is not high, and become "information islands" [6]. However, the requirements of inter-departmental collaborative office and university information portal require that the university's information system is a highly integrated and open system [7]. There are multiple sets of information systems in different departments or within the same department in colleges and universities, with their own databases and independent application programs. Each application system is highly independent, and data and business cannot be shared. The last strategy is the language-based method [8].

It is similar to the template-based method, but uses a deep learning method to obtain text words from visual information, and then generates descriptive sentences through a language model. In 2015, Fang et al. [9] used multiple instance learning (Multiple.Instance.Learning. MIL) method to extract from images. The solution process of video description task can be divided into two stages: video feature extraction and Text generation. Due to the CNN network's excellent results in the field of computer vision, researchers generally extract visual features based on the CNN structure [10].

With the expansion of the university scale and the establishment of the campus network, all departments of the university have adopted the computer as an auxiliary management method, and developed various management systems as support. Nowadays [11], in the construction of teaching resource database in colleges and universities, teachers usually focus on the analysis of course content in their normal teaching process and lead students to research and develop a certain topic [12].

Throughout the selection of teaching methods and the focus of work on the instructional design process, developers need to have multiple roles [13]. If the teaching process is optimized in the course, it is no longer necessary to start the teacher development from the script, he must also carry out the teaching design. The global monthly network video traffic in Fixed Internet (fixed Internet access) and Mobile (mobile phone mobile network access) The growth of video traffic is fast, especially the latter, which increased by more than 12 times in 2019 compared with 2014. It can also play an

effective role in the cultivation of students' values and the optimization of moral quality [14].

Under the background of informatization education, innovating education and teaching methods and improving teaching quality have become research hotspots in major universities; how to integrate traditional culture with ideological and political courses [15]. Web service is an object deployed on the Web that can be invoked by users or It has the characteristics of good encapsulation, loose coupling, protocol specification and high integration performance [16].

2. THE PROPOSED METHODOLOGY

2.1 The Network Video Automatic Generation Technology

Computers and videos for teachers' lectures are installed in the classrooms to utilize the existing teaching resources, including Microsoft Visualizers, mixers and other systems, and are connected to the campus network. Word, Excel, PowerPoint> Charts, graphics, this program adds a camera (head), function curves, three-dimensional animation, sound and even movies on this basis. Used to shoot teacher videos. The previous chapter introduced the VD-FF model that only added video features in the first unit.

The model adopts CNN-LSTM structure, encodes video information based on CNN network, and then uses LSTM network to decode. However, the previous chapter introduced the VD-FF model that only added video features in the first unit. The model adopts CNN-LSTM structure, encodes video information based on CNN network, and then uses LSTM network to decode. However, this text modeling method based on LSTM network only learns the sentence order information, and the quality of the generated text is not high. At the same time, it is suitable for teachers to record it, so that teachers with rich teaching experience will not be burned into CDs or uploaded. The teaching idea ofautomatically generating a network on the server is not familiar with computer applications, and there is no dedicated network multimedia teaching resource library, which supports students' on-demand playback. That is, there is a preference difference problem between video owners and viewers, as shown in Figure 4-2. There are both subjective and objective reasons for this difference: one is that the default thumbnails given by the system may have poor representation; the other is that video owners only choose thumbnails according to their own wishes and needs. The text involved in the video description set is too simple, and the training samples of the data set are too few. When the network is complex, it is prone to overfitting. Therefore, this chapter verifies the model in this chapter on the image description set. The image description problem is similar to the video description problem.

2.2 The Integrating Cultural Communication in Colleges and Universities

The service provider such as the embodiment of Confucianism in the life of contemporary Chinese people and the communication of Chinese ideas and sustainable development is the owner of the service, it registers with the service agent to configure and publish the service, and patiently waits for other services and users Provide its own functionality; the service requester is the consumer of the Web service. The reason for the first problem above may be that the language information learned by the model is still relatively small. Especially in the case of only video feature

input, it is difficult to learn complex and diverse language structures. The reason for the second problem may be due to the lack of relational constraints between visual and textual information in the model. Between the two modalities. The left end of the channel is the video feature extraction part. The average value extraction method based on the AlexNet network is used to extract a frame feature every 10 frames to obtain the average value of all frame features.

And use the LSTM network decoder to get the description sentence at the right end. Service-Oriented Architecture is an IT strategy that organizes disparate application functions into interoperable, standards-based services that can be quickly combined and reused to meet business needs. Therefore, how to adaptively present the corresponding video thumbnails is also very challenging for research. This chapter attempts to propose a unified solution framework, which not only needs to ensure that the generated thumbnails are clearly visible, have better accessibility and content representation, but also needs to provide video owners and video viewers with personalities that meet their respective needs as much as possible. Thumbnails.

2.3 The Integration of The Information System for the Integration of Cultural Communication in Colleges and Universities

Interfaces are usually published in public registries or directories, where they are categorized by the different services offered, like businesses and phone numbers listed in the yellow pages of a phone book. For some liberal arts majors for newspapers, professionals, or those unfamiliar with computer applications, the text can systematically express abstract and general knowledge; including browsing on video sharing site pages and quick access to video search results check out etc.

Therefore, under the current application background, a good and effective video thumbnail generation recommendation method has a great application prospect. Including browsing on video sharing website pages and quick review of video search results. Therefore, under the current application background, a good and effective video thumbnail generation recommendation method has a great application prospect. The first layer is the existing program resources, the second layer is the component layer that encapsulates the functions of the underlying system, the third layer is the service layer composed of various functional services provided by the underlying components, and the fourth layer is the use of various functional services. The constructed business process layer.

As the basic structural element of distributed services on the network, the ESB integration approach treats the system as interconnected discrete distributed services through an asynchronous,message-oriented communication infrastructure. The service bus is used to construct each independent Web service, and the campus network server is engraved into a CD-ROM for long-term storage, so that the class or direct playback of video and VCD, so that the love and art of watching online teaching materials can be well displayed in the network courseware. The job is like being there. Automatically generate network multimedia teaching resources. This process does not need to count the dragon screen, and is compatible with a variety of file formats.

3. CONCLUSIONS

This paper discusses the thinking and process of developing this system, emphasizing analysis and design modeling. From system requirement analysis, design, implementation to testing, UML modeling method is always followed. And the number of key frames of each shot is dynamically determined according to the change of visual content in the shot. This method only uses the global HSV color histogram features, so it runs very fast. The experimental results obtained by testing on multiple videos show that the extracted key frames can effectively characterize the main visual content of the entire video. The introduction of SOA provides a solution for colleges and universities, the application of SOA can effectively utilize and exert the value of the existing system.

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