

# Intelligent Type Platform Design for Leisure Sports Tourism Resource Development Based on Complex Speech Recognition Algorithm

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**Abstract:** This paper proposes a fixed-length sequential forgetting coding (Ordinally Forgetting Encoding, FOFE) method for language model modeling. FOFE models the word positions in the sequence through a simple sequential forgetting mechanism to provide tourists with personalized service functions required for tourism and improve the quality of Chongzuo tourism services. The platform focuses on promoting tourist attractions, recommending tourist routes, and booking tickets. Through the integration of the resources of various tourist attractions in Chongzuo, information such as tickets, tourist routes, tourist services, etc. will be pushed on the platform. Strengthen the development of industrial integration, improve the security system, pay attention to the government's regulatory function, and give full play to the advantages of media publicity. Rural leisure sports tourism resources development strategy.

**Keywords:** Intelligent Type Platform Design, Leisure Sports Tourism, Tourism Resource Development, Complex Speech Recognition

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## 1. INTRODUCTION

Speech recognition technology (Automatic Speech Recognition, ASR), also known as automatic speech recognition. Its goal is to convert the lexical content of human speech into computer-readable input [1]. That is, the language that the computer understands. It is an important research direction of speech signal processing. In line with the trend of the "Internet +" era, the connection between the tourism market and the Internet is getting closer and closer. Tourism official accounts have been established in many regions [2]. They combine with WeChat public platform to fully integrate and tap local tourism resources. Sports tourism refers to tourism that tourists take part in or watch various fitness entertainment, sports competitions, sports exchanges, etc. as the main purpose. Although sports tourism only accounts for around #M's share of tourism [3].

Since there is no comprehensive well-off without the health of the whole people, it has made high and far-reaching requirements for building a well-off society [4] in an all-round way and a strong physique and contributed to the realization of socialist modernization with Chinese characteristics. Control the operation and work of a machine or robot [5]. For example, the commonly used mobile phones have already implemented voice dialing. It is also possible in the future to use voice to control the driving of cars and other equipment [6].

Speech recognition refers to the process that machines convert speech signals into corresponding text files or commands through recognition and understanding [7]. The two main aspects of pattern recognition are feature extraction and pattern classification. Online travel provides travel consumers with numerous travel products and services [8], and it is a challenging task for travelers to read through all this information to plan their travel, leisure time [9]. In the era of

pursuing tourism quality, tourists are paying more and more attention to the quality of tourism products and services. How to make it easier for tourism consumers to filter out the tourism information they need and push relevant tourism service information to potential consumers [10]. Human voice signals the generation and perception of speech is an extremely complex process, which can be divided into three stages: speech generation, speech transmission and speech perception. In the production stage of speech, the different vocal organs of human beings, including the lungs, trachea, larynx, pharynx, nose, and mouth, together form a complex pronunciation system. The part of the larynx is called the glottis, and the expiratory passage from the glottis to the lips is called the vocal tract. In recent years, Recommender Systems (RSs) have become more and more popular with the widespread adaptation to deal with the problem of information overload in various application fields such as e-commerce, entertainment, and e-tourism [11].

The recommender system can purposefully push tourists' potentially favorite tourist information services to facilitate users to obtain the required tourist information resources [12]. The Hadoop Distributed File System (HDFS) [13] is used to store massive Using the Spark [14] cloud computing platform based on memory operation, the algorithm implementation can parallelize the tourism big data and improve the efficiency of the algorithm. The concept of deep learning comes from artificial neural networks [15]. The early artificial neural network was proposed mainly to simulate the working mechanism of the brain. It abstracts the neuron network of the human brain from the perspective of information processing, so as to achieve the purpose of simulating the cognitive and learning ability of the human brain. Its ultimate goal is to achieve natural language communication between humans and machines [16].

In recent years, with the rapid development of speech recognition technology, it has moved from laboratory research to marketization [17] and has been widely used in high-tech fields such as communications, home appliances, and medical care. In order to solve this problem, we learn from and study the relevant WeChat public platforms of tourist cities inside and outside the district and build a Chongzuo smart tourism service platform based on WeChat official accounts. integration of tourism resources [18].

Due to the obvious advantages and disadvantages of a single traditional tourism recommendation algorithm, the research based on combined tourism recommendation algorithm is gradually increasing. Logesh et al. [19] proposed a travel recommendation model based on combinatorial technology, which combined clustering algorithm, contextual information and opinion mining technology and collaborative filtering algorithm.

Compared with the traditional GMM-HMM system, more than 20% performance improvement can be obtained. Since then, researchers at Big M have devoted themselves to the study of acoustic modeling based on deep neural networks, and a lot of work has emerged. In this section, we mainly introduce the research status of speech recognition based on deep neural network in two points, namely, the network structure of acoustic model and the optimization of acoustic model training efficiency.

## 2. THE PROPOSED METHODOLOGY

### 2.1 The Complex Speech Recognition Algorithms

Some consonants are unvoiced, and some are voiced. Therefore, the beginning and end of a Chinese character are usually unvoiced, and the middle part is vowel. Vowels and unvoiced sounds have the following properties: Compared with FNN, RNN has a depth in time, so it can effectively capture the long-term correlation in the sequence. But unfortunately, the high computational complexity makes it difficult to generalize RNN or LSTM to some large tasks, such as acoustic modeling tasks involving tens of thousands of hours of speech recognition. The time-varying voice signal determines that it cannot be processed in the entire time domain, which is also a difficulty in voice signal processing. However, after a large number of experiments, it can be considered that its characteristics are basically unchanged within a short time (female 11: 10 ~ 30 mms), which is the short-term stable characteristics of speech signals. The whole word unit modeling is to model the speech signal corresponding to the whole word, and one word corresponds to one model.

The accuracy of modeling in this way is better, and the pronunciation changes caused by the contextual influence of the phonemes in the word can be ignored. As in the experiment of isolated word recognition in this paper, the whole word is modeled. The difficulty of mixed programming of c10 and MATLAB resides in the connection settings and parameter transmission of Mallaby Visual c++. There is no way to use the MATLAB function. All need to properly load Malcom in VC and set up the Visual C++ integrated editor environment. By adding explicit orthogonal constraints to the feature extraction layer, we will show that the HOPE method is very effective for learning both supervised and unsupervised DNNs. In unsupervised learning tasks, our research shows that the MLE-based HOPE learning algorithm

can be used as an efficient method for unsupervised DNN learning from unlabeled data.

### 2.2 The Development of Leisure Sports Tourism Resources

Common window functions include rectangular window, Hamming window, and Hanning window. The Hamming window is designed to divide the speech signal into frames. The reason. The shape of the window function is very important in the time-domain analysis of speech signals. The rectangular window function has the advantage of good spectral smoothness. Order information such as special food and specialty sales in Chongzuo region can be easily obtained and inquired by tourists through smart phones. travel information.

The WeChat official account platform provides tourists with the opportunity to save travel expenses, so that tourists can arrange travel plans more reasonably Tourism development plan. According to the resource characteristics of coastal areas and the needs of sports tourism development, the goal of the extended development model is the integrated development of leisure sports and tourism. The main body of operation is leisure sports enterprises, and sometimes the two operate jointly. At present, my country's sports tourism has no shortage of tourist attractions, tourism markets, and tourism consumption entities, and the government's macro-control has the advantage of policy support. After using the web crawler code written in Python to crawl information data such as user ratings and comment texts of various tourist attractions, it is necessary to the crawled raw data is further sorted, because there are some messy and disturbing data information in the crawled data.

Secondly, the WeChat official account is used as the control terminal of the Chongzuo smart tourism service platform. Users only need to pay attention to the official account to enjoy the service without installing other software, which saves the memory of the mobile phone and can provide users with tourism services quickly. The method is easily accepted by the majority of users to develop coastal sports tourism; the central part develops wetland tourism with the two national nature reserves in Yancheng as the center and can also develop sports eco-tourism products featuring coastal forest belts, coastal grasslands and tidal flats through the industry. Infiltrate, extend, and expand to promote the development of related industries, and realize rural ecological protection, resource utilization, and sustainable economic development through the integrated utilization of funds, technological innovation, and management.

### 2.3 The Intelligent Type Platform Design for Tourism Resource Development

After successfully logging in, the administrator enters the personal center background of the official account and can manage users in the background of the official account. The administrator can sort the users who have followed the official account. The newly followed users will be ranked at the top of the list. In terms of tourist attractions recommendation, the recommendation system often only uses the user's rating or comment text information and does not well integrate the user. The combination of review text and rating information leads to the lack of accuracy and validity of tourist attractions recommendation. Text information for ratings and reviews.

The development of sports tourism should become a new idea for developing the economy of coastal areas. Doing a good job in the cake of sports tourism is not only the needs of

tourists, but also the needs of the development of the tourism market. This paper proposes two improved algorithm models for the recommendation of tourist attractions. The algorithm model of LDA topic weighting of user ratings and review text information and the algorithm model of LDA topic weighting based on scenic spot ratings and review text information. Both of these algorithm models mine the user's potential preference information through the user's rating and comment text information and carry out personalized attraction push for the target object.

### 3. CONCLUSIONS

An optimization scheme of tourist attractions recommendation algorithm based on Spark cloud computing platform technology is proposed, which aims to provide users with good tourist attractions recommendation information services by using big data related technologies and related recommendation algorithms. The composition of a continuous speech recognition system is introduced, and the functions of each part are analyzed. Including signal preprocessing and feature extraction, dictionary, task grammar, language model, recognition network, embedded training algorithm and recognition algorithm. The smart tourism service platform can find problems in time through the tourist feedback module, so that the scenic spot can improve and improve the service quality, so as to promote the healthy development of tourism industry.

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