

Modeling and Analysis of Language Transfer in Second Language Acquisition Assisted by Data Stream Fusion Algorithm

Wei Shi

Hunan University of Finance
and Economics, Hunan
Changsha 410011, China

Abstract: The Wiener process method is used to construct the degradation model, and the offline parameters are iteratively optimized using the EM algorithm combined with the training engine data. Based on Bayesian method and test engine data, an evolutionary data stream clustering algorithm (I-APDenStream) based on the fusion of nearest neighbor propagation and density is proposed. This algorithm uses the traditional two-stage processing model, namely online and offline clustering, to find the differences between English and Chinese general pronouns, the similarity and difference between the mother tongue and the target language, and the generalization of the sentence pattern or usage of the mother tongue. Use negative transfer. It aims to fully understand and scientifically grasp the status and role of language transfer in second language acquisition.

Keywords: Language Transfer, Second Language Acquisition, Data Stream Fusion Algorithm

1. INTRODUCTION

The reliability level of aero-engines directly affects the safe operation of civil aviation aircraft [1]. Timely maintenance and repair can not only improve the safety level of the aircraft, but also reduce the operating costs of airlines and increase the competitiveness of the industry [2]. Therefore, the research on the reliability of aero-engines is very important. The research on the phenomenon of language transfer has a long history. Chomsky's Universal Grammar, which emerged in the 1980s [3], was once the main theory to explain language acquisition. This theory believes that human language acquisition depends on the language acquisition mechanism in the brain [4].

However, some traditional clustering algorithms have been difficult to adapt to the fast and changeable data flow data. Scholars at home and abroad have studied many new clustering algorithms for data flow mining, and have made great progress in this regard [5]. The process of second language acquisition is not only affected by the native language of ontology, but also by the impact of original language thinking on new knowledge [6]. The fundamental factor of the phenomenon of mother tongue transfer is that the user transplants certain structures into the target language, that is, the negative impact of the mother tongue on the foreign language. Pragmatics [7], that is, language pragmatics, studies specific discourses in specific situations, with particular emphasis on the understanding and use of language in different language communication environments [8]. Language acquisition goes through target language input - mastery - output. Therefore, by comparing the differences between the two [9], it is possible to predict the difficulty of second language acquisition and the possible mistakes of learners, and use it as the basis for curriculum setting and teaching material compilation [10].

Clustering algorithms have become an indispensable part of data mining, and are often used to mine the distribution and implicit patterns of data information [11]. The performance of the clustering algorithm is proportional to the similarity within the class, and inversely proportional to the similarity between

the classes. However, it is not to deny the predictive role of contrastive analysis [12], but to think that the role of contrastive analysis in foreign language teaching cannot be overstated, and its diagnostic role is greater than its predictive role. Remaining useful life (RUL) [13] forecasting is an important part of forecasting and health management (PHM) technology. Current RUL forecasting is mainly based on data-driven methods, including probability distributions, statistical theoretical models, machine learning [14], etc. Liu Shuaijun uses the method of combining similarity and Kalman filtering. For Chinese students who learn English, the characteristics of Chinese in the output English persist in the levels of phonetics, syntax and grammar [15].

In the whole process of English learning, it is difficult for learners to get rid of the influence of their mother tongue. , in which the first part of the online algorithm [16] is mainly used to statistically analyze the feature vector of the data flow to obtain its summary message [17]; while the second stage is responsible for the corresponding user request, and generates the final more accurate clustering result according to the information obtained in the first stage [18]. Only in a specific sense" can it be realized. In the basic research of "language game theory" and the theoretical research on second language acquisition [19], the value of meaning in the traditional sense is highlighted, that is, the language level of learners is stagnant and difficult to improve [20].

Therefore, it is more important and urgent to study the negative transfer of pragmatics. This paper uses data collected in teaching practice to diagnose learners' errors in the use of the target language [21]. The CMAPSS data set was verified for RUL prediction; Ren Ziqiang et al. fused multiple performance data, and predicted the engine RUL through the Wiener process with linear drift coefficient. First, start with the second language output results [22]. This level of research has roughly gone through three stages. One of the stages is the combination of the comparative analysis hypothesis and the study of language transfer phenomenon. The behaviorist school that prevailed in linguistics in the 20 years after World War II believed that [23].

There are two main categories of language transfer in second language acquisition, namely, the promoting misuse and interference of old knowledge on learning new knowledge, that is, positive transfer and negative transfer in the phenomenon [24]. Language transfer is a common phenomenon in the second language acquisition process. When learners communicate in the target language, they try to express their thoughts with the help of the structure, semantics or culture of their native language, and pragmatic transfer will occur [25].

2. THE PROPOSED METHODOLOGY

2.1 The Data Stream Fusion Algorithm

Core grammar refers to the general rules of grammar, while the rules of peripheral grammar refer to the specific rules of a language. More importantly, Universal Grammar introduces markup theory into the study of language transfer theory. If a part of high-quality cluster members are selected to participate in the fusion process, the quality of the clustering results will be significantly improved. Avoidance phenomenon refers to the phenomenon that learners deliberately avoid using certain language structures due to the differences between the mother tongue and the target language.

When the phenomenon of avoidance occurs, learners usually rarely use or do not use certain structures in the target language at all. Kalman filtering is a method for denoising the current data by combining known data. The main principle is to use the previous moment. The state estimate value and the current time state observation value calculate the current time state estimate value. Language transfer is considered to be a major obstacle in language learning. People are quite positive about the negative role of mother tongue in second language acquisition. The idea of the algorithm is to match the newly arrived data points with the existing data model. If the matching is successful, the existing model will be updated. Otherwise, these data points that may be abnormal points will be stored in the cache box. This theory affirms the influence of the object on the subject's cognition of the relative person, but regards the need of the subject's cognition as the unilateral effect of the object and ignores the active role of the subject.

It has a positive role in promoting; on the contrary, the application of the native language habit is not only in the grammatical error, but also in the formation of an incorrect expression, especially the usage of the language. The negative pragmatic transfer is not a language error of the learner, but a Refers to pragmatic failures, which do not come from the grammatical errors of the language itself, that is, it is not the grammatical structure that leads to incomprehensible words. Errors and difficult flaws in the acquisition prove that differences between languages do not always cause language transfer. However, it has also been pointed out that the labelling theory is not yet conceptually clear.

2.2 Data Stream Fusion Algorithm Assists Second Language Acquisition

The characteristics of the data set are different, and the design of the selection strategy is also different. On this premise, Javad proposes an adaptive selection strategy. For example, in Chinese, the transitional conjunction "but" is often used to express the transition relationship. Therefore, in the English composition of Chinese students We will see the use of the word more. However, there are still few studies on discourse transfer, but the impact of cross-lingual discourse differences and cross-cultural pragmatic differences on language transfer is indeed can not be ignored.

The state update equation, also known as data correction, is to use the current state measurement value and state a priori estimate to estimate the current state a posteriori, so as to calculate the current state estimate. The existing research has the following main characteristics: (1) The first level of research has achieved more results. The discussion of the researchers focused on whether the influence of mother tongue is positive or negative.

This algorithm proposes a dynamic deletion mechanism for micro-clusters, which handles historical micro-clusters and existing micro-clusters well, making the algorithm model more accurate. There is no major improvement. College English teaching should be the embodiment of language practice communication in the field of cultural ideology carried by language. It should not be a machine learning that does twice the work with half the effort. In the second language acquisition, the cultural background of the non-linguistic situation. As far as pronouns are concerned, many scholars have found that English mostly uses pronouns in the form of antecedents, while Chinese mostly adopts zero anaphora.

In some places where English can use pronouns, Chinese must use nouns to connect, that is, Chinese nouns often correspond to English pronouns. In this system, learners start from their mother tongue, go through an interlanguage, and gradually approach the target language.

2.3 The Modeling and Analysis of Language Transfer in Second Language Acquisition

"Substituting the phonological regularity of the target language with the phonological regularity of the native language is the most direct manifestation of the interlanguage voice."

It is best to select the one that can reflect the implicit characteristics of the dataset, and design the best strategy. The selection process should be carried out with reference to the weight. In order to realize the fusion algorithm, the weight of each cluster member can be calculated. Data normalization is a standardized method that maps the amount of data to the [0,1] interval. This method can eliminate the influence of the dimension and magnitude of the original data, balance the data fusion process, and ensure the comprehensive health index to the original data information. The degree of explanation is beneficial for model building and later prediction. Connection theory or Parallel Distributed Processing Model is an important theory in cognitive science and neuroscience. Connectivity theory has been applied to language acquisition research for less than 10 years.

Proximity Propagation (AP) is a clustering method for the mutual transmission of information between neighbors. This algorithm mainly uses the similarity between data point pairs as a benchmark. The boundary between things and "I" is removed, and the concept of differential treatment given by the world is removed. "Heaven and earth coexist with me, and all things and I are one." Obtain the best class representative point set, so that all data points can be assigned to their corresponding classes. The sum of the similarity between the representative points reaches the maximum. Various apposition relationships between pronouns and nouns, such as "Li Hai drunk himself", "Li Hai" and "self" are apposition relationships, the apposition "self" is placed after the predicate "drunk", and there are many kinds of Chinese "this" Instructions, etc. are also not available in English.

The marker theory of language points out the relationship between markers and language transfer: that is, when the native language has marker settings and the target language has no marker settings, the possibility of native language transfer is very small; and when the native language has no marker settings.

3. CONCLUSIONS

In this paper, in order to obtain better data stream clustering results, a new clustering algorithm, I-APDenStream, is designed. This algorithm is a fusion of the neighbor propagation flow clustering algorithm and the density flow clustering algorithm. The research on the phenomenon of language transfer has a long history, and there are gratifying achievements in many aspects, but there are still many problems to be solved. Universal grammar is proposed for children's language acquisition. In addition, it should also be noted that the way Chinese expresses speech behaviors is often different from the way English expresses behaviors, so as to avoid mixing up the pragmatic differences between English and Chinese and causing mistakes.

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