Logic Writing of Chinese Declarative Sentences Relying on Marked Verb Matching Lambek Checking Algorithm

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Abstract. Natural language processing is an emerging discipline and a rapidly developing discipline. The development of natural language processing technology is full of opportunities and challenges, difficulties and frustrations. The establishment of various models and the proposal of various methods have brought vitality to natural language processing; although current systems such as machine translation and speech recognition are still in The immature stage, but the increasingly widespread application of natural language processing, proves its important position in the computer field and even the entire scientific and technological field. By using the marked verb matching Lambek check algorithm, I believe that in the near future, logical sentence writing and processing will have a brighter future.

Keywords: Verbs, Matching, Writing

1. Introduction

In recent years, advanced computer technology has developed rapidly, the storage capacity of machines has gradually increased and the speed of calculation has gradually accelerated, while the price has shown a downward trend, prompting the development of large-capacity machine-readable corpora. There are now hundreds of millions of vocabulary text samples in many regions and some novel and better statistical language models have emerged. To make full use of the existing value of natural language processing technology, it is necessary to think from the perspective of statistics using the Lambek check algorithm.

2. Analysis of natural language processing algorithms

Language is a unique tool for humans to communicate and express thinking[1]. Therefore, only when a computer can truly master the ability to process natural language can it be truly intelligent. Natural language processing includes multiple aspects, which generally include three parts: cognition, understanding and generation. Cognition and understanding is to let the computer turn the input
language into meaningful symbols and connections and then process it according to the purpose. Generating refers to converting the data information in the computer into natural language. In this way, computer users do not have to invest huge energy to learn computer languages that are difficult to understand, they can easily interact with computer systems through natural language, which is also an important reason and purpose for studying natural language processing technology\[2\]. Natural language processing includes the following modules.

![Nature Language Process Diagram](image)

**Figure 1.** Nature language processing modules

3. **Overview of statistical learning models**

With the decline of computer manufacturing costs and the improvement of computer computing power, researchers gradually regard machine learning algorithms as the focus of natural language processing technology research. Researchers have begun to tend to establish natural language processing corpora, which is a natural language method for machine learning processing Foundation. At the same time, the researchers realized that machine translation must ensure that the translation and the original text are semantically accurate\[3\]. Therefore, semantic analysis has gradually become the core research problem of natural language processing. Studies have shown that by studying and counting a large amount of language text data, the problem of computer processing language can be better solved. This method is called a statistical learning model. At this point, natural language processing has re-entered the stage of rapid development.

4. **Logical writing of Chinese declarative sentences based on Lambek check algorithm**

4.1. **Lambek check algorithm**

Since the algorithm selected in the Lambek check and writing operation of the system in this article is mainly the Lambek check and writing method which combines the word bank and the word statistics, it is necessary to perform functional detection on this algorithm skill. Before the system conducts field Lambek verification and writing, select different detection methods at the same time. After completing the system field Lambek verification and writing, the system screen will display the total time spent in the system Lambek verification and writing process and proceed according to this time. System time handling adjustment. Interactively link the system web page with the user and enter the text field in the system input command and display the final results of Lambek check and writing on the screen as the input form in the text box. This module has a relatively independent function, can provide a more
comprehensive network interface and field information transmission and can be comprehensively processed. In the algorithm module, the system call interface is provided for the overall system and interaction with the system is calculated separately, while ensuring that the algorithm and the interface have the same function and actual detection and comparison. This module is further divided into two parts: field dictionary management and Lambek checking and writing processing. In the field dictionary management, the system center field console is called to avoid its use on the web page and the system construction and software update of the dictionary are performed at the same time. operating. In Lambek check and writing process, first input the text information of the original field of the system and use a separate weight algorithm to segment the field vocabulary in the text information, perform system operations and finally return to the Lambek check and writing results to complete the system operation.

In the test module, provide a graphical interface to the central system and manage the output and input documents, save the Lambek check and writing results in the algorithm module and test the algorithm effect and finally calculate the system field Lambek check and writing results. In the Lambek check calculation and writing recognition module, the computer is used to simulate the human brain's understanding of the weight of sentences and the grammatical, sentence and semantic analysis of text information is carried out at the same time as Lambek check calculation and writing and the ambiguity is processed according to the grammatical data and semantic analysis results. First, coordinate the sentences in the overall control part, use the grammatical and semantic analysis results of the related words and sentences of the word segmentation system to carry out Lambek check and writing recognition on the ambiguous fields and need to use a large number of language sentence knowledge data information at the same time. Each word that appears close in the information is systematically counted for the combined frequency and at the same time, the frequency of mutual occurrence between them is calculated to indicate the close degree of the combination relationship with the frequency of acquired mutual occurrence. The flow of natural language processing is as follows.

![Figure 2. Nature language processing flow](image)

### 4.2. Corpus construction

For language learning of a corpus, the natural language processing technology based on statistics is the key way to obtain a variety of knowledge in the corpus. The topics around it include: the corpus is regarded as the only source of information data and all knowledge is in the corpus To acquire; to acquire knowledge with the help of statistical methods, to explain knowledge in a statistical sense, etc. For the natural language processing technology, the advancement of machine translation technology brings convenience to people's work on the one hand and on the other hand, due to the advantage of low operating cost, it brings many business opportunities to the industrialization of this technology. For example, by entering an article in a translation software, you can immediately obtain free translations. For less demanding web pages, source files can be found on the Internet. Therefore, machine translation has obvious advantages for human translation. Its translation business for most
companies' business correspondence is very attractive. However, there is still a lack of human tone and intonation, as well as the use of body language elements. Just like in literature, the author adds color to the work through writing skills. If machine translation is used, it will not imitate the translator better, so it is processed in natural language. In the development prospect of processing, it can be transformed towards real human activities.

4.3. Attention

Natural language is full of ambiguity, human activities and expressions are very complex and the vocabulary and grammatical rules in the language are limited, which leads to the same language form may express many different meanings. Taking Chinese as an example, Chinese generally consists of words forming words, sentences forming words and sentences forming paragraphs, which contain multiple layers of meaning conversion. Statements of the same form may have different meanings in different contexts. Conversely, the same meaning can also be expressed in different forms of sentences. This is the charm of language, but it also brings difficulties to natural language processing. In Chinese, the Lambek check and writing problem is one of the disambiguation tasks. Words are the unit with the smallest semantics, so the Lambek check and writing problems in natural language processing are urgently needed to be solved. In oral expressions, words are coherent and so is writing. Since Chinese does not have natural Lambek calculation and writing like English and other languages, there is an additional layer of obstacles in the processing of Chinese. In Lambek check and writing process, the computer will add a separator after each word and sometimes the semantics are ambiguous and the insertion of the separator becomes difficult. For example, the term "Nanjing Yangtze River Bridge" can be understood as a bridge across the Yangtze River in Nanjing or a mayor named Nanjing Bridge. To achieve correct Lambek check and writing, it is necessary to combine the context and fully understand the semantics of the text, which is obviously a challenge for the computer.

5. Conclusion

The research field of natural language processing has expanded from text to speech recognition, syntactic analysis, machine translation, machine learning and information retrieval. While natural language processing is constantly being applied, it is also promoting other emerging disciplines such as biology Informatics and other developments. Improving the computer's ability to process language has become the focus of future research.

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