## A Chinese Nested Named Entity Recognition Model Based on Lexical Features

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**Abstract :** In the field of named entity recognition, most of the research has been conducted around simple entities. However, for nested named entities, which still contain entities within entities, it has been difficult to identify them accurately due to their boundary ambiguity. In this paper, a hierarchical recognition model is constructed based on the grammatical structure and semantic features of Chinese text for boundary calculation based on lexical features. The analysis is carried out at different levels in terms of granularity, semantics, and lexicality, respectively, avoiding repetitive work to reduce computational effort and using the semantic features of words to calculate the boundaries of entities to improve the accuracy of the recognition work. The results of the experiments carried out on web-based microblogging data show that the model achieves an accuracy of 86.33% and an F1 value of 89.27% in recognizing nested named entities, making up for the shortcomings of some previous recognition models and improving the efficiency of recognition of nested named entities.

**Keywords :** coarse-grained, nested named entity, Chinese natural language processing, word embedding, T-SNE dimensionality reduction algorithm

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