News Classification based on Deep Learning

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Abstract

News classification is one of the important tasks in the field of natural language processing that allows users to find the information they need easily and quickly by classifying vast amounts of news data by subject. For news classification, various techniques such as SVM and random forest have been proposed. In this paper, we propose a news classification system based on deep learning. The proposed system indexes news text with TF-IDF and classifies news using multilayer Dense layers and dropout techniques. The performance test of the proposed system using Reuters data shows an 81% recognition rate.

1 Introduction

Text classification is one of the important tasks in the field of natural language processing such as emotion analysis, subject labeling, and Q&A [1]. In particular, the amount of information has exploded due to the development of the Internet and social media, and it is becoming difficult for users to find the information they want. News classification organizes vast amounts of news data by subject, which helps users find the information they need easily and quickly. It provides news that meets the interests of users through personalized news recommendation systems, etc., thereby increasing the accessibility of information and improving the efficiency of information consumption.

2 Related Works

3 News Classification System

4 Experiment

5 Conclusion

References

[1] Qian Li, Hao Peng, Jianxin Li, Congying Xia, Renyu Yang, Lichao Sun, Philip S. Yu, and Lifang He. (2021) A Survey on Text Classification: From Traditional to Deep Learning. *ACM Trans. Intell. Syst. Technol. 37, 4, Article 111*.