



Relational Graph Convolutional Networks for Sentiment Analysis

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Abstract

With the growth of textual data across online platforms, sentiment analysis has become crucial for extracting insights from user-generated content. While traditional approaches and deep learning models have shown promise, they cannot often capture complex relationships between entities. In this paper, we propose leveraging Relational Graph Convolutional Networks (RGCNs) for sentiment analysis, which offer interpretability and flexibility by capturing dependencies between data points represented as nodes in a graph. We demonstrate the effectiveness of our approach by using pre-trained language models such as BERT and RoBERTa with RGCN architecture on product reviews from Amazon and Digikala datasets and evaluating the results. Our experiments highlight the effectiveness of RGCNs in capturing relational information for sentiment analysis tasks.

Keywords: Relational Graph Convolutional Networks, Sentiment analysis, Pretrained Language Models, BERT, Amazon, Digikala

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