

Mask-Prompt-Rerank: An Unsupervised Method for Text Sentiment Transfer

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Abstract : Text sentiment transfer is an important branch of text style transfer. The goal is to generate text with another sentiment attribute based on a text with a specific sentiment attribute while maintaining the content and semantic information unrelated to sentiment unchanged in the process. There are currently two main challenges in this field: no parallel corpus and text attribute entanglement. In response to the above problems, this paper proposed a novel solution: Mask-Prompt-Rerank. Use the method of masking the sentiment words and then using prompt regeneration to transfer the sentence sentiment. Experiments on two sentiment benchmark datasets and one formality transfer benchmark dataset show that this approach makes the performance of small pre-trained language models comparable to that of the most advanced large models, while consuming two orders of magnitude less computing and memory.

Keywords : language model, natural language processing, prompt, text sentiment transfer

Conference Title : ICSLP 2023 : International Conference on Speech and Language Processing

Conference Location : San Francisco, United States

Conference Dates : November 06-07, 2023