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**Automatic Generation of News Comments Based on Gated Attention Neural Networks**

**Abstract**

With the development of recurrent neural networks (RNN), various natural language generation (NLG) tasks have boomed in the past few years, such as response generation in conversation and poetry generation. However, automatic generation of news comments is anew, challenging and not well-studied task in NLG. Different from other NLG tasks, this task requires the contextual relevance between comments and news. In addition, we need to generate diversified comments, because different people usually have different opinions on the same news in the real world. In this paper, we propose a gated attention neural network model (GANN) to generate news comments. To address the problem of contextual relevance, we introduce the gated attention mechanism to use news context self-adaptively and selectively. To ensure the diversity of comments, we use random sample and relevance control to generate comments with different topics and degrees of relevance. Moreover, we apply generative adversarial nets to improve GANN. Automatic evaluation with perplexity score reveals that GANN outperforms the existing comment generation methods. Human evaluation proves that the generated news comments are close to human comments.