Weather News Generation with Hierarchical Copy Network

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Recent neural models have achieved outstanding progress on text generation tasks such as machine translation, summarization, and data-to-text. However, most methods focus on generating text from single source, which is not suitable for generating weather news since the weather data is a mixture of various sources including numerical observation data and human-written natural languages from the weather reports. Furthermore, news articles are composed of dozens of sentences, but prior models struggle at generating long multiple sentences. To address these problems, we suggest a hierarchical copy network that helps model to (1) distinguish different data sources, (2) learn what to copy from the source, and (3) generate next sentences based on prior generated sentences. We also propose Weather Meaning Representation (WMR), a frame-based meaning representation for weather domain, and a corresponding data-to-WMR conversion method. By converting volatile raw data to WMR format, we provide the model with the consistent hierarchical information. Experiment results on *KMA-YonhapNews Datasets* show that our approach achieves reasonable performance improvements.