



AUTOMATIC SUMMARIZATION BASED ON AUTOMATICALLY-INDUCED ONTOLOGY

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ABSTRACT—In this paper, we proposed an ontology-based method for summarizing documents. Automatic summarization based on ontology is considered better than other methods. However, existing methods require the ontology to be manually constructed and maintained, which is subjective and time-consuming, so the ontology-based method is not used often. In addition, existing summarization methods consider only similarities between sentences and ontology terms, ignoring “semantics,” “reading comprehension,” and “topic-related” features. To improve the summarization, we propose a novel method of fully automatic ontology construction and text summarization. The proposed method first “learns” the ontology from selected documents. After the domain ontology is generated, other technologies are used to evaluate semantics, reading comprehension, and topic relatedness. We evaluate the proposed method by using it to summarize journal papers, and find that it outperforms existing methods.

Key Words: automatic summarization, ontology, machine learning.