

Abstract

The rapid development of news in the digital era has led to significant growth in news volume. Finding key information in the news efficiently is becoming increasingly important. Although previous studies have succeeded in developing a news-topic recommender system using keyword selection and topic extraction, there is still an area for improvement in the dataset, which is still limited to a specific topic. Therefore, we propose the use of RAKE algorithm and compare it with TF-IDF for keyword extraction in multi-topic Indonesian News data based on a specific period in the news topic recommender system. RAKE algorithm breaks text into phrases based on specific delimiters, assesses each phrase based on frequency and relevancy, and then selects the phrase with the highest score as the main keyword. Meanwhile, TF-IDF identifies single keywords based on their frequency of appearance in documents and their inverse frequency in documents. Based on the performance comparison evaluation results, the proposed system has proven efficient in obtaining recommendations for various news topics within a certain period, with a maximum keyword score of 5000. This shows that the approach used effectively extracts main keywords and provides recommendations for relevant news topics. In the analyzed period, RAKE excels in extracting specific multi-word phrases, and TF-IDF provides stability in a broader range of topics.

Keywords

temporal keyword extraction, RAKE algorithm, news-topic recommender system, topic extraction, indonesian news