Pembangkitan Parafrase Untuk Reading Comprehension

Faishal Januarahman[1], Ade Romadhony[2]

[1,2]Fakultas Informatika, Universitas Telkom, Bandung
[1]faishaljanuarahman@students.telkomuniversity.ac.id, [2]aderomadhony@telkomuniversity.ac.id,

Abstract

Reading comprehension is an assessment that tests readers understanding of a concept from the given text. The testing process is conducted by providing questions related to the content within the context of the text. The purpose of this research is to create new question variations from existing questions, and one of the methods to achieve this is by paraphrasing questions through the task of paraphrase generation. This can help ensure that readers have fully grasped a concept of a text. This study employs a traditional approach known as the thesaurus-based approach, in which the process involves substituting synonyms using the Indonesian Thesaurus dictionary. The data used consists of a list of Indonesian language reading comprehension assessment questions ranging from elementary to high school levels. To measure the quality of the generated paraphrased questions, two evaluation processes are conducted which are automatic evaluation with the scores ranging from 0-1 and human evaluation with score ranging from 1-4. The automatic evaluation includes the BLEU-4 metric, resulting in a score of 0.044, and the ROUGE-L metric, resulting an F1-score of 0.421. As for human evaluation, the obtained relevancy score is 2.533, and the fluency score is 3.186. The results from both evaluation metrics indicate that the generated paraphrased questions exhibit diverse new word choices but tend to have slightly different meanings compared to the reference questions.

Keywords: BLEU, Human Evaluation, Paraphrase Generation, ROUGE, Reading Comprehension, Thesaurus