

Abstract

There is a lot of text information on the internet, but humans find it difficult to understand all of this information in a short time. Automatic text summarization is a technology that helps people to read a summarization of the text that produced by an application without human intervention. First, the data from a website is taken by using parsing. Pattern matching is also needed to filter all of HTML tags from the taken data to produce a pure text. Then, application use tokenization to break the text into a group of words. Using binary firefly algorithm, each section of the text was given a weight based on similarity score of the contained words which is determined by TF-IDF matrix. This research takes seven sections of text that have the highest weight similarity scores. Then the summary was evaluated by using ROUGE metric. The results showed that compared to abstractive, extractive summarization method gave a relative improvement of 47.06% on ROUGE-1, 34.4% on ROUGE-2, and 44.92% on ROUGE-L.

Keywords: text summarization, binary firefly algorithm, TF-IDF matrix, ROUGE evaluation