

Abstract

The automatic text summarization is the process of taking the most important information from a text or some text to create a brief version of that text using a computer-based application.

On this final assessment the *Automatic Text summarization* technique based on Graph approach for multi-document news is implemented. This process produces an output in the form of extractive summary which is consist of sentences. The ranking grades method based on graph which is applied is *LexRank*, which will arrange grades in a rank of a sentence from multi documents that are used by calculate the *centrality* value based on the concept of *Similarity*, the highest ranking then will be extracted to be a summary. The *centrality* methods that are used on this final assessment are *degree centrality* which is a direct adaptation from *LexRank* and *modified LexRank centrality* method which is a direct modification of *LexRank* with *PageRank* as the basic idea. The calculation on both methods are by the similarity calculation between sentences. Similarity methods that are used on this final assessment are *idf modified cosine similarity* method which is also a direct adaptation from *LexRank*, and *Long Common Subsequences similarity* method that is a modification to observe similarity between sentences based on sentences meaning. The summary results which is extracted are not chronological in meaning yet, because of that it needs the *ordering* process. *Ordering* will be used is a method of *chronological ordering*. The problem of a multi documents summarization there is a *redundancy* of data or repeated information to removed it have to do a *Reranker* process.

The evaluation has to do by ROUGE *evaluation toolkit*. "The test results show method of *degree centrality* with *idf modified cosine similarity* has the best accuracy from the other method,that have been implemented on this last task."

Keywords: automatic text summarization, *LexRank*, *Degree centrality*, *Modified LexRank centrality*, *idf modified cosine similarity*, *Long common subsequences similarity*, *Reranker*, *chronological ordering*.