

## Abstract

The increasing of information needs cause a problem occur that how is the way to get information more effectively and efficiently. Information retrieval system was used to solve this problem.

Information retrieval system consist of indexing subsystem and searching subsystem that cultivate the document collection and query to get the relevance document. BM25 method that is implemented in searching subsystem, will return the relevance score based on similarity between document and query. The relevance score will be accumulated for all of the query, therefore the total of relevance score between document and query could be retrieve.

By implemented BM25, the highest precision (13.56%) could be reached on the lowest amount of document collection (200 documents). The highest recall (91.08%) could be reached on the highest amount of document collection (1033 documents). The Interpolated average precision (IAP) was influenced by document length normalization factor (factor  $b$ ). The changing of IAP that caused by document length normalization factor evokes on different scoring document retrieved. The highest IAP (60.74%) could be reached on  $b=0.6$ .

**Keywords:** information retrieval, BM25.