

## Abstract

Online forums users are often had a problem while searching, due to the limited functionality of the search engine in it. Increasing problems for information on the threads are often overlap, and it becomes difficult to find relevant threads with the intent of the user. Giving recommendations to the user's search results will be useful for more direct to the relevant information.

Query expansion is the process of reformulating the initial query to improve retrieval performance in information retrieval system operation. In the context of Web search engines, query expansion involves evaluating user input (what words are typed into a search query region, and sometimes the type of data) and expand to match the search request additional documents. One of the benefits of query expansion is to provide recommendations that are more relevant search results for users.

Based on the background described, the goal of this thesis is to apply for a search query expansion in an online forum. Query expansion algorithm is implemented with a priori to capture the connectedness between the threads in a forum online. Pengujian done by comparing the value of precision with and without query expansion as well as evaluating the recommendations of the users.

The results of system performance is obtained 0.53 by using the support parameter  $2/60$  and confidence 0.0 with count of association rule is 90 . From the research results we can get the conclusion, completeness factor of the data user activity on the thread and inter-thread overlap greatly affect the performance of the apriori algorithm in the case of a thread recommendation in online forum.

**Keywords:** online forum, information retrieval, query expansion, apriori algorithm.