

Abstract

Search process in general is using a short and undetailed query, therefore there is a possibility that ambiguous query is entered to the searching system, causing poor result in the end. The solution to this problem is to reformulate the query, such as query expansion.

In this final project, i use one of the data mining concept, the *association rules* as the method to get the *concept* of the *query expansion* process. First of all, the data retrieved from the past activity is collected and processed so we can identified the pattern as *market based analysis* model. Next, using apriori algorithm the data is now represented as rules representing how good is the relation between two terms. Then, after mapping the rules to graph, the concept is now can be collected and we can continue processing the expansion process using that concept.

As the results, there is an enchancement to the searching proses seen from the precision and recall increase. Precision increase happened at the spesification concept of the expansion while recall incease happened at the synonym concept. Therefore the query expansion performance cannot be separated with the goal of the searching process itself.

Keywords: *concept based query expansion, query log, association rules*