

## **Abstract**

**The Telkom University Open Library promotes rapid growth in terms of both the amount and wealth of its content. As a consequence, a search method is needed that is able to provide more accurate results. Search based on metadata has provided additional options, but also has the disadvantage of not being able to find documents that have a similarity. This weakness can be overcome by semantic search with the intent and purpose of contextual terms, as referred to in search data by combining Latent Semantic Analysis (LSA) and weighted tree similarity. Based on the test results, the built system is able to provide relevant information with an average value of precision and good memory. The average precision value is 57.1181868% and the average recall value is 85.0848178%. The results of the average value of 100% withdrawal means the level of success in finding relevant documents. Detachable, the LSA method and the weighted tree provide relevant documents for its users as well as the accuracy between the queries provided with the document search results.**

**Keywords:** *latent semantic analysis, weighted tree similarity*