

Zulfah Binti Toyibah. 2024. *Sistem Rekomendasi Skripsi Menggunakan Metode Content Based Filtering*. Skripsi, Program Studi Pendidikan Informatika, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing: Nuru Aini, S.Kom., M.Kom.

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan sistem rekomendasi skripsi yang memfasilitasi pencarian skripsi secara otomatis di Ruang Baca Fakultas Ilmu Pendidikan Universitas Trunojoyo Madura. Sistem rekomendasi yang dikembangkan mengintegrasikan fitur pengumpulan skripsi mandiri. Metode yang digunakan adalah *content based filtering* menggunakan algoritma TF-IDF, SVD, dan *Cosine Similarity*. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model *waterfall* yang memiliki beberapa tahapan yaitu analisis, desain, pengodean, dan pengujian. Berdasarkan hasil uji coba ahli performansi algoritma, diperoleh nilai 100% (sangat layak). Hasil validasi ahli sistem menunjukkan nilai 1, berarti seluruh fitur pada sistem rekomendasi dapat berfungsi dengan baik. Hasil validasi ahli web diperoleh hasil persentase sebesar 96,92% (sangat layak). Pada hasil uji coba pengguna, diperoleh hasil persentase sebesar 91,3% (sangat layak). Pada pengujian performa algoritma, dilakukan uji coba dengan 40 sampel kata kunci menggunakan *confusion matrix* pada *threshold* 3, *threshold* 5, *threshold* 10, dan *threshold* 15. Sistem rekomendasi dikatakan efektif apabila perolehan nilai ketepatan (*precision*) tinggi walaupun nilai perolehan *recall* rendah. Pada penelitian ini *threshold* 3 memiliki nilai *precision* tertinggi dibandingkan pengujian pada *threshold* lainnya yaitu *accuracy* 97%, *precision* 95%, *recall* 17%, dan *f1-score* sebesar 28%.

Kata Kunci: *content based filtering*, *cosine similarity*, sistem rekomendasi, skripsi, SVD, TF-IDF

Zulfah Binti Toyibah. 2024. *Thesis Recommendation System Using Content Based Filtering Method*. Bachelor Thesis, Informatics Education Study Program, Faculty of Education, Trunojoyo Madura University. Supervisor: Nuru Aini, S.Kom., M.Kom.

ABSTRACT

This research aims to develop a thesis recommendation system that facilitates automatic thesis search in the Reading Room of the Faculty of Education, Trunojoyo University Madura. The developed recommendation system integrates the independent thesis collection feature. The method used is content based filtering using TF-IDF, SVD, and Cosine Similarity algorithms. This research uses the Research and Development (R&D) method with a waterfall model that has several stages, namely analysis, design, coding, and testing. Based on the results of the algorithm performance expert test, a value of 100% (very feasible) was obtained. System expert validation results show a value of 1, meaning that all features on the recommendation system can function properly. The results of web expert validation obtained a percentage of 96.92% (very feasible). In the user trial results, a percentage result of 91.3% (very feasible) was obtained. In testing the performance of the algorithm, a trial was conducted with 40 keyword samples using confusion matrix at 4 thresholds. The recommendation system is said to be effective if the precision value is high even though the recall value is low. In this study, threshold 3 has the highest precision value, namely 97% accuracy, 95% precision, 17% recall, and f1-score of 28%.

Keywords: *content based filtering, cosine similarity, recommendation system, SVD, TF-IDF, thesis*