

ABSTRAK

SISTEM PENDUKUNG KEPUTUSAN UNTUK PEMILIHAN ASISTEN DOSEN PADA BADAN KHUSUS HIMPUNAN MAHASISWA JURUSAN ILMU KOMPUTER FMIPA UNIVERSITAS LAMPUNG MENGUNAKAN *HYBRID* AHP-TOPSIS-SAW (HATS)

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Proses seleksi asisten dosen di Jurusan Ilmu Komputer FMIPA Universitas Lampung masih menghadapi tantangan berupa tingginya potensi bias subjektivitas dan inefisiensi rekapitulasi data manual. Untuk mengatasi permasalahan tersebut, penelitian ini mengembangkan Sistem Pendukung Keputusan (SPK) berbasis web yang dibangun menggunakan *framework* Next.js, React, dan PostgreSQL. Sistem ini menerapkan pendekatan *hybrid scoring* bernama HATS yang menggabungkan metode *Analytic Hierarchy Process* (AHP) untuk pembobotan kriteria, *Technique for Order Preference by Similarity to Ideal Solution* (TOPSIS) untuk mengukur jarak solusi ideal, dan *Simple Additive Weighting* (SAW) untuk kalkulasi preferensi linear. Pengujian fungsional dilakukan menggunakan *Black Box Testing*, sedangkan evaluasi penerimaan sistem diuji menggunakan metode *User Acceptance Testing* (UAT). Hasil pengujian menunjukkan bahwa seluruh modul sistem berjalan 100% sesuai dengan spesifikasi kebutuhan tanpa adanya kesalahan logika. Selain itu, evaluasi UAT menghasilkan persentase kelayakan sebesar 91,1%. Penemuan ini menunjukkan bahwa kombinasi pendekatan HATS berbasis web mampu meningkatkan objektivitas, akurasi, dan efisiensi dalam merekomendasikan peringkat seleksi asisten dosen.

Kata Kunci: Sistem Pendukung Keputusan, *Hybrid* AHP-TOPSIS-SAW, Seleksi Asisten Dosen, Next.js.

ABSTRACT

DEVELOPMENT OF A DECISION SUPPORT SYSTEM FOR TEACHING ASSISTANT SELECTION AT THE COMPUTER SCIENCE STUDENT ASSOCIATION OF LAMPUNG UNIVERSITY USING HYBRID AHP-TOPSIS-SAW

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The student assistant selection process at the Department of Computer Science, FMIPA Universitas Lampung, currently faces challenges such as high potential for subjective bias and time inefficiencies due to manual data recapitulation. To address these issues, this study developed a web-based Decision Support System (DSS) built using Next.js, React, and PostgreSQL frameworks. This system implements a hybrid scoring approach named HATS, which integrates the Analytic Hierarchy Process (AHP) for criteria weighting, the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) to measure ideal solution distance, and Simple Additive Weighting (SAW) for linear preference calculation. Functional testing was conducted using Black Box Testing, while system acceptance was evaluated through User Acceptance Testing (UAT). The test results showed that all system modules executed 100% in accordance with requirement specifications with zero logical errors. Furthermore, the UAT evaluation yielded a feasibility score of 91.1%. These findings demonstrate that the combination of the web-based HATS approach can enhance objectivity, accuracy, and efficiency in recommending teaching assistant selection rankings.

Keyword: *Decision Support System, Hybrid AHP-TOPSIS-SAW, Teaching Assistant Selection, Next.js.*