

ABSTRAK

Pemilihan laptop dengan spesifikasi yang sesuai menjadi kebutuhan penting bagi mahasiswa Teknik Informatika dalam menunjang aktivitas akademik, seperti pemrograman, pengolahan data, dan pengembangan perangkat lunak. Banyaknya variasi merek, spesifikasi, dan harga laptop di pasaran sering menyebabkan kesulitan dalam pengambilan keputusan. Penelitian ini bertujuan untuk membangun Sistem Pendukung Keputusan (SPK) yang dapat merekomendasikan spesifikasi laptop berdasarkan kebutuhan belajar mahasiswa Teknik Informatika menggunakan metode *Simple Additive Weighting* (SAW) dan *K-Nearest Neighbors* (KNN). Metode SAW digunakan untuk melakukan perankingan alternatif laptop berdasarkan bobot kriteria, sedangkan metode KNN digunakan untuk mengklasifikasikan dan menganalisis kedekatan data guna meningkatkan akurasi rekomendasi. Kriteria yang digunakan meliputi merek, prosesor, RAM, kartu grafis, dan kapasitas penyimpanan. Sistem dikembangkan berbasis web menggunakan bahasa pemrograman PHP dan database MySQL. Hasil penelitian menunjukkan bahwa sistem yang dibangun mampu memberikan rekomendasi spesifikasi laptop yang sesuai dengan kebutuhan belajar mahasiswa secara objektif dan efektif, sehingga dapat membantu mahasiswa dalam menentukan pilihan laptop yang tepat.

Kata kunci: *sistem pendukung keputusan, SAW, KNN, rekomendasi laptop, teknik informatika.*

ABSTRACT

Selecting a laptop with appropriate specifications is an important requirement for Informatics Engineering students to support academic activities such as programming, data processing, and software development. The wide variety of laptop brands, specifications, and prices available in the market often creates difficulties in decision-making. This study aims to develop a Decision Support System (DSS) that can recommend laptop specifications based on the learning needs of Informatics Engineering students using the Simple Additive Weighting (SAW) and K-Nearest Neighbors (KNN) methods. The SAW method is used to rank laptop alternatives based on weighted criteria, while the KNN method is used to classify and analyze data proximity to improve recommendation accuracy. The criteria used include brand, processor, RAM, graphics card, and storage capacity. The system is developed as a web-based application using PHP programming language and MySQL database. The results of this study indicate that the developed system is capable of providing objective and effective recommendations for laptop specifications that match students' learning needs, thereby assisting students in making appropriate laptop choices.

Keywords: decision support system, SAW, KNN, laptop recommendation, informatics engineering.