

ABSTRAK

Industri skincare terus berkembang pesat dengan menyediakan berbagai pilihan produk di pasaran, sehingga konsumen sering mengalami kebingungan (consumer confusion) dalam menentukan produk yang sesuai dengan jenis dan kondisi kulit mereka. Penelitian ini bertujuan untuk merancang dan menerapkan Sistem Pendukung Keputusan (SPK) berbasis web menggunakan metode TOPSIS (*Technique for Order Preference by Similarity to Ideal Solution*) untuk membantu pengguna memilih produk skincare secara objektif. Data yang digunakan berasal dari Kaggle berupa produk perawatan kulit dari platform Sephora, kemudian disimpan dan dikelola melalui Supabase. Tahap pra-pemrosesan meliputi pembersihan data dan normalisasi. Metode TOPSIS diterapkan menggunakan tiga kriteria utama, yaitu harga, rating, dan kesesuaian kulit, untuk menghasilkan peringkat produk berdasarkan nilai preferensi terhadap solusi ideal positif dan solusi ideal negatif. Evaluasi sistem dilakukan melalui validasi hasil perhitungan TOPSIS dengan membandingkan hasil perhitungan manual dan hasil dari sistem, serta pengujian beta terhadap 40 responden menggunakan pendekatan *Technology Acceptance Model* (TAM) melalui variabel *Perceived Usefulness* dan *Perceived Ease of Use*. Hasil validasi menunjukkan bahwa sistem menghasilkan nilai preferensi dan urutan produk yang sesuai dengan perhitungan manual. Hasil pengujian pengguna menunjukkan nilai *Perceived Usefulness* sebesar 73,78 dan *Perceived Ease of Use* sebesar 73,39. Hasil tersebut menunjukkan bahwa sistem dapat diterima oleh pengguna sebagai pendukung keputusan dalam memilih produk skincare.

Kata kunci: Sistem Pendukung Keputusan, Skincare, TOPSIS, Rekomendasi Produk, Web.

ABSTRACT

The skincare industry continues to grow rapidly by providing various product choices in the market, causing consumers to often experience confusion (consumer confusion) in determining products that suit their skin types and conditions. This study aims to design and implement a web-based Decision Support System (DSS) using the TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) method to assist users in selecting skincare products objectively. The data used in this study were obtained from Kaggle, consisting of skincare products from the Sephora platform, and were stored and managed through Supabase. The preprocessing stage involved data cleaning and normalization. The TOPSIS method was implemented using three main criteria, namely price, rating, and skin suitability, to generate product rankings based on preference values toward the positive ideal solution and negative ideal solution. System evaluation was conducted by validating the TOPSIS calculation results through a comparison between manual calculations and system results, as well as beta testing involving 40 respondents using the Technology Acceptance Model (TAM) approach through the variables Perceived Usefulness and Perceived Ease of Use. The validation results showed that the system generated preference values and product rankings consistent with manual calculations. The user evaluation results showed that the Perceived Usefulness value was 73.78 and the Perceived Ease of Use value was 73.39. These results indicate that the system is accepted by users as a decision support tool for selecting skincare products.

Keywords: Decision Support System, Skincare, TOPSIS, Product Recommendation, Web.



