

ABSTRAK

Latifah. 2026. Sistem Pendukung Keputusan Pemilihan Cushion Terbaik Menggunakan Metode *Technique For Order Of Preference By Similarity To Ideal Solution (TOPSIS)* Berbasis Web. Skripsi. Program Studi Teknik Informatika, FT, Universitas PGRI Madiun. Pembimbing (I) Sekreningsih Nita, S.Kom., M.T. (II) Erny Untari, S.Pd., M.Pd.

Banyaknya pilihan produk *cushion* dan ketergantungan pada ulasan subjektif berisiko menyebabkan kesalahan pemilihan, pemborosan finansial, serta masalah kesehatan kulit. Penelitian ini bertujuan mengembangkan Sistem Pendukung Keputusan (SPK) berbasis *web* untuk pemilihan *cushion* terbaik menggunakan metode *Technique for Order Preference by Similarity to Ideal Solution (TOPSIS)*. Sistem dikembangkan dengan metode *Waterfall*, dimodelkan menggunakan UML, serta diimplementasikan menggunakan PHP, *framework* Laravel, dan basis data MySQL. Proses rekomendasi diawali penyaringan jenis kulit, kemudian dilakukan perankingan TOPSIS berdasarkan empat kriteria (harga, *coverage*, *finish*, dan ketahanan) terhadap tujuh alternatif merek. Hasil pengujian *Black Box Testing* menunjukkan seluruh fungsi sistem berjalan sesuai spesifikasi, sedangkan pengujian *System Usability Scale (SUS)* memperoleh skor rata-rata 81,916 dengan kategori *Excellent*. Penelitian ini berhasil menghasilkan sistem yang mampu memberikan rekomendasi produk *cushion* secara objektif, presisi, dan mudah digunakan.

Kata Kunci: Sistem Pendukung Keputusan, *TOPSIS*, *Cushion*, *Waterfall*, *System Usability Scale*.

ABSTRACT

Latifah. 2026. *Web-Based Decision Support System for Selecting the Best Cushion Using the Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) Method*. Informatics, Faculty of Engineering, Universitas PGRI Madiun. Advisors: (I) Sekreningsih Nita, S.Kom., M.T. Co-Advisor (II) Erny Untari, S.Pd., M.Pd.

The abundance of cushion product options and reliance on subjective reviews risk leading to product misselection, financial waste, and skin health issues. This study aims to develop a web-based Decision Support System (DSS) for selecting the best cushion product using the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method. The system was developed using the Waterfall method, modeled with Unified Modeling Language (UML), and implemented using PHP, the Laravel framework, and a MySQL database. The recommendation process begins with skin type filtering, followed by TOPSIS ranking based on four criteria (price, coverage, finish, and durability) across seven brand alternatives. The results of Black Box Testing indicate that all system functions operate according to specifications, while System Usability Scale (SUS) testing achieved an average score of 81.916, placing it in the "Excellent" category. Consequently, this study successfully yielded a system capable of delivering objective, precise, and user-friendly cushion product recommendations.

Keywords: *Decision Support System, TOPSIS, Cushion, Waterfall, System Usability Scale.*