UNIVERSITI TEKNOLOGI MARA

PERFUME RECOMMENDATION SYSTEM USING CONTENT-BASED FILTERING ALGORITHM

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ABSTRACT

This research investigates the development of a perfume recommendation system using a content-based filtering approach. The system is designed to provide personalized recommendations by matching perfume characteristics, including scent, concentration, and department, with user preferences. The methodology involves processing a curated dataset from Kaggle, applying TF-IDF vectorization to analyze perfume attributes, and utilizing cosine similarity to generate recommendations. The system was tested across three evaluations, achieving an average Precision of 0.77 (77%), Recall of 0.68 (68%), and an F1-Score of 0.72 (72%). The results indicate that content-based filtering identifies relevant perfumes while improving user satisfaction and reducing decision-making time. The study focuses on Malaysian users who seek personalized perfume recommendations suited to the country's hot climate. These findings demonstrate the potential of content-based filtering in revolutionizing the perfume discovery process.

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