

ABSTRACT

The hijab fashion industry in Indonesia continues to grow rapidly, with Buttonsscarves recognized as one of the premium brands known for its exclusive hijab collections. As the variety of hijab and clothing designs increases, visual compatibility between the two has become an important factor in consumer decision-making. However, the abundance of models, patterns, and colors often makes it difficult for consumers to choose a hijab that visually matches the clothing they wear. This challenge is further amplified in the era of online shopping, where purchase decisions are often based solely on product images. To date, there has been limited research that specifically integrates three types of visual features, namely RGB Histogram, Local Binary Pattern, and Canny Edge Detection, with the Cosine Similarity method to build a hijab recommendation system, particularly for the Buttonsscarves brand. This study develops a Content-Based Image Retrieval (CBIR) approach with a multi-feature integration, combining the three visual features, where the recommendation process is conducted by calculating the Cosine Similarity between the feature vector of the user's input clothing image and the feature vectors of hijab images in the database to generate 10 visually similar and relevant hijab recommendations. The experimental results show that the recommendation system achieved an average precision value of 91% across 12 categories of clothing queries based on human evaluation, indicating that the system is capable of providing relevant and accurate recommendations. The resulting system is expected to support consumers in selecting hijabs that visually match their clothing, particularly in the context of online shopping.

Keywords : Content-Based Image Retrieval, RGB Histogram, Local Binary Pattern, Canny Edge Detection, Cosine Similarity