Klasifikasi Motif Batik Menggunakan *K-Nearest Neighbors* Berdasarkan *Grey Level Co-Occurrence Matrix* (GLCM)

(*Classification of Batik Patterns Using K-Nearest Neighbors Based on Grey Level Co-Occurrence Matrix* (*GLCM*))

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ABSTRACT

Batik is a traditional Indonesian textile art recognized by UNESCO as an intangible cultural heritage on October 2, 2009, and it has a close relationship with the customs and cultures of various regions in Indonesia. The creativity of batik artisans continues to evolve, resulting in many new patterns that are often difficult for the public to recognize. To help identify distinctive Jember batik patterns, digital image processing technology is required. This study uses the Gray Level Co-Occurrence Matrix (GLCM) method for image extraction with parameters including ASM, Contrast, IDM, Entropy, and Correlation based on four orientation angles: 0°, 45°, 90°, and 135°. The classification method used is K-Nearest Neighbors (KNN) with 480 images, employing various ratios of training and testing data: 90:10, 80:20, 70:30, 60:40, and 50:50. The testing results show the highest accuracy of 96.84% was obtained with an 80:20 data ratio and a value of K= 9.

***Keywords** : batik, pengolahan citra digital, GLCM, K-Nearest Neighbors*