

Abstract

Facial and ethnic recognition became a popular research topic. Different from face recognition, ethnic recognition classifies faces according to general features of certain ethnic groups. Ethnic recognition in face image is increasingly becoming a necessity and is used in various fields. In this study, discussed the development of an Indonesian ethnic recognition system based on periorbital features on facial images. Ethnic recognition is carried out using the five largest ethnic groups of Indonesia namely Sundanese, Javanese, Banjar, Bugis and Malay. The method used is the Gray Level Co-occurrence Matrix (GLCM) and Color Histogram. Random Forest is used as a classifier. Based on testing using cross validation with optimal k values, the model produces an accuracy of 98.65%.

Keywords: ethnic recognition, gray level co-occurrence matrix (glcm), color histogram, random forest