ABSTRACT

Face recognition technology continues to innovate from a faster and more accurate authentication system capable of encouraging development of Anthropology which greatly influences the needs of forensic data. Primary data needed for forensic needs are age, gender, race and height. The human face provides a lot of information, one of the studies related to facial recognition is classification which can be grouped based on race, gender, form and others.

Demographic features, such as race and gender, influence the process of recognizing human faces. As the times progressed, the human population became increasingly heterogeneous and it was very difficult to distinguish between one human race and another only through the specific characteristics of their race. Therefore, a technology is needed that can be used as a solution in classifying the human race accurately and effectively.

This focused on image processing on the human face to identify the human race into 3 classes, namely Mongoloid, Caucasian and Negroid. The Discrete Wavelet Transform (DWT) method and the Learning Vector Quantization (LVQ) classification are used in facial image processing. In the system, 90 sample images are used for training stored in the database and 60 test images that are not stored in the database are used as test images. The results of this research prove that the DWT method and LVQ classification are suitable to be used in classifying and identifying 3 human race groups with an accuracy of 86,67 % and computational time of 16,5779 seconds.

Keywords: *Human Race, Discrete Wavelet Transform (DWT), Learning Vector Quantization Neural Networks (LVQ-NN).*