ABSTRACT

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IMPLEMENTATION DISCRETE COSINE TRANSFORM AND RADIAL BASIS FUNCTION NEURAL NETWORK IN FACIAL IMAGE RECOGNITION
(xii + 56 pages; 25 figures; 13 tables; 4 appendices)

Facial image recognition or usually is known as face recognition, nowadays has been used so often. But by the time, the needed of face recognition is not enough because there’s some fault in recognizing the faces. Usually extraction method and image training with Neural Network is used to recognize facial image.

Method of facial image recognition is made using Java Programming language which is supported by openCV and JAMA. This program use extraction method Discrete Cosine Transform and Radial Basis Function Neural Network. This program is designed by few steps such as pre-processing, training and facial image recognition. It has been tested to the facial image recognition by calculating the DCT coefficient 3 x 3.

After the testing was conducted to evaluate the system, the result showed this method can recognize facial image 100 % with 35 images. Level of success from this image recognition is effected by the noise in the image thus with more noise the result of image recognition will decrease.