

ABSTRACT

The increase of graduated students in IT Telkom nowadays gives the impact of more Final Projects that are made by those students. This circumstance forces The Institute to make the system that can document Student's final projects simply and fast. Until now, documentation system that has been doing in Library of Electrical and Communication Faculty is still manual by typing the data, like title, name, and student number, using keyboard.

In this final project, the writer tries to make automatic documentation system of Final Projects that can recognize the title, name and student number. The process of documentation is by recognizing the pattern of alphabetical characters (for title and name) and numbers (for student number) from an image that is captured from webcam using *K-Nearest Neighbours* (K-NN) as pattern recognition method.

Sample testing image that is used in this system is from external webcam with resolution 640x480. The image is the white cover of the Final Project book with has font Arial size 16. The image is proceeded to become binary image by using 5 thresholds, such as 90, 95, 100, 105, and 110 when K is 1 and 3. The average result test of this system for the accuracy reaches 96.8 % in recognizing letter, 99.12 % in recognizing number, 97.4 % in recognizing title, 96.5 % in recognizing name, and 96.7 % in recognizing student number with average computing time is about 2.77 seconds.

Keywords : image processing, ekstraksi ciri, K-Nearest Neighbors