ABSTRACT

Javanese Character is a set of old traditional letter from Java, Indonesia. It has a complicated structure and it has similiar shape to each other.

Optical Character Recognition (OCR) is a field in computer vision that attempted to recognize a certain character within an image. Various kinds of research have been done by using various methods in order to make an OCR system which able to recognize characters properly. Because of Javanese Character's charasteristic, a strong method is needed in order to build an high accurate OCR system for Recognizing Javanese Character.

Directional Element Feature (DEF) is a feature exctraction method that has been used in many research and has been proven to be strong enough to recognize Chinese Characters which has complicated shape structure. DEF builds feature vector by count up image edge neighborhood element in each character. Support Vector Machines (SVM) is a classification method that works by finding a hyperplane with smallest margin to separate two data classes. In some previous research, SVM has been proven to be strong enough to classify data, especially data that has not been seen by the system before. In some other research, SVM has been proven better than ANN in classifying data.

In this Final Project, A Javanese Character Recognition System is build using DEF and SVM. Test result shows the best recognition accuracy is 93,6% by recognizing 250 handwritten Javanese Character which is 10 letter for each character.

Keywords: OCR, Handwritten, Javanese Character, DEF, SVM