

ABSTRACT

Narcotics are dangerous substances used by humans that can be drunk, smoked, inhaled and injected can attack the soul and emotions of its users. Narcotics as a baby as medical therapy. But in the present, most of the world's people, especially Indonesia, misuse narcotics as personal needs without knowing the substances contained therein. For this reason, people need to get knowledge related to narcotics. However, with the limited detection equipment and the relatively high cost, this detection device is only owned by the narcotics eradication party. Based on these conditions and with the rapid development of technology today, a new innovation will be created, namely an application system that can detect narcotics based on its texture..

In this Final Project research, a system design has been carried out to remove narcotics by using digital images after the narcotics image. The feature extraction method used is Fractal Dimension and Support Vector Machine (SVM) as classifiers. Fractal Dimension is the method used for images from images. Whereas SVM is a learning method machine that works with the aim of a hyperplane which is an input space in the input space.

The results obtained in this Final Project are the MATLAB-based applications that can process narcotics images to detect narcotics. The number of narcotics image samples used in this Final Project research is 120 images for training data with each class consisting of 30 images and 100 images for test data with each class consisting of 25 images. The performance generated from the system is the average accuracy of four types of narcotics by 91% and computation time of 0.4773 seconds with details of the parameters used is size 256×256 , number of fractal dimensions 8, type of polynomial kernel and multiclass One-Against -One (OAO).

Keywords: *Narcotics, Sabu, Fractal Dimension, Support Vector Machine*