

ABSTRACT

Support Vector Machine (SVM) introduced by Vapnik in 1992 as one of the best concept in pattern recognition. As one of method in pattern recognition, SVM is too young than others. Eventhought it, evaluate of SVM in difference applications makes SVM as state of art in pattern recognition and for the future, it will be increase to use SVM.

Fingerprint identification is one of the applications to evaluate SVM system. SVM consist in two classes, +1 and -1. Classification problems can determine using *hyperplane*. *Hyperplane* is separate line between one class to each others. To find *hyperplane*, we use *margin hyperplane* and the short distance between pattern and margin we called *support vector*.

The best accuration achived is 92.1739% for image with RBF (Gaussian) kernel and 4.3478% when image use Polynomial kernel. From the result, RBF (Gaussian) kernel is compatible in fingerprint classification.

Keyword : *Pattern recognition, state of art, hyperplane, margin hyperplane, support vector, RBF (Gaussian) kernel, Polynomia kernel.*