Abstract

Support vector machine is one method of supervised learning typically used for data classification and commonly used for handle dataset which have two classes. To separate the classes, it uses a field separator called hyperplane. Problem arise when the primal form of the formula for finding best hyperplane is very difficult to solve, hence the dual form is used to alter the value of w in the form of α. This problem is usually referred to as Quadratic programming. Sequential Minimal Optimization (SMO) is an algorithm that is used to solve quadratic programming problem (QP Problem) by trying to find the value of α with analytical quadratic programming solver in each step so the training time needed is faster. In This final project is showed that SMO can do the training time faster than Quadratic programming algorithm, but in terms of accuracy there are many parameters which makes the value of accuracy to be up and down on each test.

Key word: support vector machine, hyperplane, quadratic programming, sequential minimal optimization, primal form, dual form.