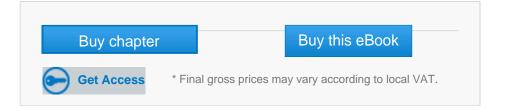


Machines Using Simulated Annealing

Fan Sun, Maosong Sun



Abstract

Transductive inference estimates classification function at samples within the test data using information from both the training and the test data set. In this paper, a new algorithm of transductive support vector machine is proposed to improve Joachims' transductive SVM to handle various data distributions. Simulated annealing heuristic is used to solve the combinatorial optimization problem of TSVM, in order to avoid the problems of having to estimate the ratio of positive/negative samples and local optimum. The experimental result shows that TSVM-SA algorithm outperforms Joachims' TSVM, especially when there is a significant deviation between the distribution of training and test data.





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