

## "Oracle inequalities and exact algorithm for dyadic decision trees"

We introduce a new algorithm for optimal dyadic decision trees (ODT). The method combines guaranteed performance in the learning theoretical sense and optimal search from the algorithmic point of view. We show that it satisfies oracle-type inequalities for various types of loss functions and is adaptive with respect of certain smoothness characteristics of the target. Experiments on artificial and benchmark data underline the versatility of the method.