

عنوان مقاله:

A Neural Network-Based Training Scheme for Probabilistic Support Vector Machine

محل انتشار:

سومین کنفرانس بین المللی فناوری اطلاعات و دانش (سال: 1386)

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خلاصه مقاله:

In this paper a new scheme is proposed for training of the support vector machine (SVM) with probabilistic constraints. In the SVM, a pattern recognition problem is converted to a constraint quadratic programming. Each constraint is related to a training sample thereupon noisy data is caused appearance of incorrect support vector. Probabilistic constraints admit presence probably of samples in each class is applied based on a distribution function for determining suitable support vectors. In this way, it is possible noisy samples have low effect for finding support vectors. In the proposed method, SVM with the probabilistic constraints is converted to form of neural network model which can be described by the nonlinear dynamical system. A set of differential equations are defined for modeling of this dynamic and converges to optimal solution for the SVM with the probabilistic constraints. Another feature of the proposed method is solving both the primal and dual problem of SVM. xperimental results show the capability of the proposed method relative to conventional SVM.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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