عنوان مقاله:

Analysis of Support Vector Machines and Kernel Functions

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خلاصه مقاله:

Support Vector Machine (SVM) is one of the classification methods in machine learning. It shows excellent performance in many pattern recognition applications. SVM map an input sample into a high dimensional feature space and try to find an optimal hyperplane. Although it has some challenges that one of them is non linear models, but a model can be mapped to a new space by doing a nonlinear transformation then use a linear model in this new space can be solved the problem. In this paper we explain some important aspects to reach the best performance such as: kernel functions and selecting them, data normalization, multiclass support vector machines, and applications. Since delay and accuracy are the important parameters to improve the performance in SVMs, we compare some of the combined algorithms with these parameters to use the best algorithms in our future works. Finally some directions for researches are provided.

کلمات کلیدی:

Classification, hyperplane, kernel functions, machine learning, support vector machine