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Minimax Optimal Rates of Convergence for Multicategory Classifications

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摘要

关键词 rate of convergence error probability modulus of continuity multicategory classification

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Abstract In the problem of

classification (or pattern recognition), given a set of \$n\$ samples, we attempt to construct a classifier \$q_n\$ with a small misclassification error. It is important to study the convergence rates of the misclassification error as \$n\$ tends to infinity. It is known that such a rate can't exist for the set of {\it all} distributions. In this paper we obtain the optimal convergence rates for a class of distributions \${\mathscr D} ^{ (\lambda,\omega)}\$ in multicategory classification and nonstandard binary classification.

Key words rate of convergence error probability modulus of continuity multicategory classification

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