论文

ASYMPTOTIC PROPERTIES OF L_1-NORM KERNEL ESTIMATOR OF THE CONDITIONAL MEDIAN

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摘要   Let (X,Y) be a pair of $R^d \times R^1$-valued random variables. In thispaper we investigate the asymptotic properties of the L_1-norm kernel estimator of the conditional median function of Y on X. Under appropriate regularity conditions, asymptotic normality and the optimal rates of convergence $n^{-(1)/(2+d)}$ and $(n^{-(1)}\log n)^{1/(2+d)}$ in the $L^q (1 \le q < \infty)$- and L^∞-norms restricted to a compactset, respectively, are obtained. Our study shows that this estimator and the well-known Nadaraya-Watson's kernel estimator of the conditional mean function of Yon X have the same asymptotic properties.

关键词   L_1-norm kernel estimator,conditional me

分类号

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Key words   L_1-norm kernel estimator   conditional median   rate of convergence   asymptotic normality

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