

Boosting local quasi-likelihood estimators

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Abstract For likelihood-based regression contexts, including generalized linear models, this paper presents a boosting algorithm for local constant quasi-likelihood estimators. Its advantages are the following: (a) the one-boosted estimator reduces bias in local constant quasi-likelihood estimators without increasing the order of the variance, (b) the boosting algorithm requires only one-dimensional maximization at each boosting step and (c) the resulting estimators can be written explicitly and simply in some practical cases.

Keywords Bias reduction · L_2 Boosting · Generalized linear models · Kernel regression · Local quasi-likelihood · Nadaraya–Watson estimator