

Iterative Optimal Sufficient Dimension Reduction for Conditional Mean in Multivariate Regression

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Abstract: Recently, Yoo and Cook (2007) developed an optimal version of Cook and Setodji (2003). When predictors are not highly skewed, the Yoo-Cook approach can be improved, especially with small samples, by iteratively estimating the inner product matrix used in their method without changing their asymptotic results. Since highly skewed predictors are often transformed for normality in regression analysis and in sufficient dimension reduction literature, the proposed method can have more useful application in practice than Yoo and Cook (2007).

Keywords: Conditional mean, Iterative approach, Multivariate regression, Sufficient dimension reduction.

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