Boosting For High-Dimensional Linear Models with Group Variables

by

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Abstract

In regression analysis, variables can often be combined into groups based on prior knowledge. Such a group structure of the predictor variables can be effectively utilized in regression analysis in order to improve identification of relevant groups of variables and to improve the prediction performance. In this paper, we study the theoretical property of a group L_2-Boosting algorithm for estimation of high-dimensional linear models with grouped variables.