Zhang, Xinyu
Model averaging by least squares approximation. (Chinese. English summary) [Zbl 07494957]

Summary: In this paper, we propose a model averaging method by adopting least squares approximation. As a result, the method can be used in linear regression models, generalized linear models, quantile regression, and so on. In particular, the classic Mallows model averaging is a special case of the proposed model averaging method. Unlike the existing literature on the distribution of model averaging where a local misspecification assumption is utilized and the resulting limiting distribution is complicated, we prove the asymptotic normality of the proposed estimator in the current paper without using the local misspecification assumption. In addition, the proposed method is extended to a high-dimensional situation. Numerical results show the promise of the proposed method.

MSC:
62F12 Asymptotic properties of parametric estimators
62H12 Estimation in multivariate analysis

Keywords:
asymptotic normality; consistency; least squares approximation; model averaging; weight choice

Full Text: DOI