

Cook's distance for ridge estimator in semiparametric regression

Semra Türkan and Oniz Toktamis

Hacettepe University, Ankara, Turkey

Abstract

The detection of influential observations has attracted a great deal of attention in last few decades. Most of the ideas of determining influential observations are based on single-case diagnostics with i th case deleted. The Cook's distance are most commonly used among the other single-case diagnostics and successfully applied to various statistical models. In this article, we propose Cook's distance for the ridge regression estimator of the parametric component in the semiparametric regression model to detect influential observations. We investigate the performance of proposed diagnostic to detect influential observations by using real data and simulation data.

Keywords

Semiparametric regression model, Ridge regression estimator, Cook's distance, Influential observations.

References

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