

Simulation on group deleted potentials for diagnostics of survival regression

ABSTRACT

The identification of multiple high leverage points (HLP) cannot be successfully carried out by using a method developed for handling single HLP. The situation gets worse when it concerns Weibull distributed censored response data. The authors proposed method for identifying multiple HLPs. The proposed method is developed based on the similar problem for handling multiple HLPs in multiple linear regression setting. Simulation study is conducted for assessing its performance across a wide range of scenarios. It is found that the proposed method has good capability to identify multiple HLPs. As a general rule, the proposed method performs better in higher covariate space dimension, larger number of outlying regressor variables, larger outlying leverage distance, larger magnitude of unusualness in response-space, larger number of multiple points clouds and higher percentage of censoring.

Keyword: Multiple high leverage points; Simulation study; Weibull regression