

國立高雄大學統計學研究所

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Estimation of Threshold boundary Logistic Regression Models

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Abstract

This talk considers the threshold boundary logistic regression (TBLR) to analyze binary data. The TBLR accommodates covariates in both the logistic regression and threshold functions. The threshold function is allowed to be a nonlinear function of multiple covariates by which to constitute a hyperplane to further describe binary data dynamics in two different states. We propose TBLR-WSVM, an ordered iterative algorithm that incorporates the weighted support vector machine (WSVM) and maximum likelihood (ML) methods to estimate the TBLR model. We conduct several simulation experiments to investigate the finite-sample performance of the TBLR-WSVM estimators.

Keywords : Logistic regression, Threshold, WSVM

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