

NON-NESTED MODEL SELECTION VIA EMPIRICAL LIKELIHOOD

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Abstract

In this dissertation we propose an Empirical Likelihood Ratio (ELR) test to conduct non-nested model selection. It allows for heteroscedasticity and it works for any two supervised statistical learning methods under mild conditions. We establish asymptotic properties for the ELR test-statistics in selection between two linear models, a time-varying coefficient model and a non-parametric model, and two general statistical learning methods. Simulations demonstrate good finite sample performance of our hypothesis testing. A real example illustrates the use of our methodology.