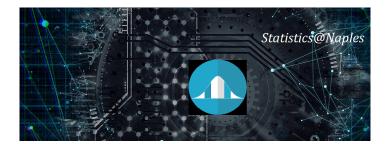Contribution ID : **10**   Type : **not specified**

Fast Bayesian Variable Screening Using Correlation Thresholds

giovedì 29 giugno 2023 10:10 (20)

We propose a fast Bayesian variable selection method for Normal regression models, using Zellner's g-prior specification. The approach is based on using thresholds on Pearson and partial correlation coefficients. Nevertheless, the proposed methodology is derived using purely Bayesian arguments derived from thresholds on Bayes factors and posterior model odds. The proposed method can be used to screen out the non-important covariates and reduce the model space size. Then, traditional, computer-intensive, Bayesian variable selection methods can be implemented without any problem with the derived reduced model space. We focus on the g-prior where the Bayes factor computations and the corresponding correlation thresholds are exact. Nevertheless, the approach is general and can be easily extended to any prior setup. The proposed method is illustrated using simulated examples.

Primary author(s) :   NTZOUFRAS, Ioannis (AUEB); PAROLI, Roberta (Universita Cattolica del Sacro Cuore)

Presenter(s) :   NTZOUFRAS, Ioannis (AUEB)

Session Classification : Third Session