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Variable selection via ranking in generalized linear models

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In many empirical domains, the availability of ultrahigh-dimensional data has led to the development of feature screening and variable selection procedures aiming to detect the informative variables of datasets and consequently remove unimportant features. In this context, we propose a ranking-based variable selection procedure that extends the Ranking Based Variable Selection technique (Baranowski et al., 2020) to general linear regression models. We explore the performance of our proposal using both simulated and empirical data. The algorithm is compared to two competitors: i) the Extended BIC (Chen and Chen, 2012); ii) the variable selection procedure based on the combination of the Sure Independence Screening (Fan and Song, 2010) and the Elastic Net (Zou and Hastie, 2005).

References

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