A Note on the Restricted Enet Estimators

Mina Norouzirad[1], Filipe. J. Marques[1,2], Danial Mazarei[3]

[1]*CMA - Center for Mathematics and Applications, NOVA School of Science and Technology, FCT NOVA, Caparica, Portugal*
[2]*Department of Mathematics, NOVA School of Science and Technology, FCT NOVA, Caparica, Portugal*
[3]*Department of Statistics, Faculty of Intelligent Systems Engineering and Data Science, Persian Gulf University, Bushehr, Iran*

Abstract

In a regression model, information is always critical to estimate accurately. The information is generally limited to sample data, and no prior knowledge of the model's parameters is assumed. Sparsity and multicollinearity are examples of theoretical knowledge that have been utilized to develop penalized estimators. However, other sources of information, such as expert suggestions, previous experiments, and studies, can also contribute non-sample information. This study aims to combine all available information to construct a new estimator called the restricted elastic net estimator. Incorrect information affects the accuracy of a prediction, but accurate information reduces prediction error. This claim was supported by using correct information to develop a more precise estimate and collect evidence to prove it. Simulated research and real-data applications demonstrated this.

Keywords

Double shrinking, Enet estimator, Prior information, Restricted Enet estimator;

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