Model Selection
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Objective Bayesian Methods for Model Selection: Introduction and Comparison

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Abstract

The basics of the Bayesian approach to model selection are first presented, as well as the motivations for the Bayesian approach. We then review four methods of developing default Bayesian procedures that have undergone considerable recent development, the Conventional Prior approach, the Bayes Information Criterion, the Intrinsic Bayes Factor, and the Fractional Bayes Factor. As part of the review, these methods are illustrated on examples involving the normal linear model. The later part of the chapter focuses on comparison of the four approaches, and includes an extensive discussion of criteria for judging model selection procedures.

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