Penalty, Shrinkage and Pretest Strategies

Variable Selection and Estimation

The objective of this book is to compare the statistical properties of penalty and non-penalty estimation strategies for some popular models. Specifically, it considers the full model, submodel, penalty, pretest and shrinkage estimation techniques for three regression models before presenting the asymptotic properties of the non-penalty estimators and their asymptotic distributional efficiency comparisons. Further, the risk properties of the non-penalty estimators and penalty estimators are explored through a Monte Carlo simulation study. Showcasing examples based on real datasets, the book will be useful for students and applied researchers in a host of applied fields.

Features

- An important and substantial contribution to the existing knowledge on submodel, pretest and shrinkage estimation and comparison with penalty estimators
- Nearly all the chapters are self-contained, providing theoretical and numerical solutions and featuring numerous examples based on real datasets
- Blends together estimation and variable selection strategies for a host of applications
- Conveys difficult ideas clearly and directly in a friendly, accessible style

Contents


Fields of interest

Statistical Theory and Methods; Statistics and Computing/Statistics Programs

Target groups

Graduate

Discount group

Professional Non-Medical

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