



Bayesian Predictive Inference for Some Linear Models under Student-t Errors

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VDM Verlag Jun 2008, 2008. Taschenbuch. Condition: Neu. This item is printed on demand - Print on Demand Neuware - In real life often we need to make inferences about the behaviour of the unobserved responses for a model based on the observed responses from the model. Regression models with normal errors are commonly considered in prediction problems. However, when the underlying distributions have heavier tails, the normal errors assumption fails to allow sufficient probability in the tail areas to make allowance for any extreme value or outliers. As well, it cannot deal with the uncorrelated but not independent observations which are common in time series and econometric studies. In such situations, the Student-t errors assumption is appropriate. Traditionally, a number of statistical methods such as the classical, structural distribution and structural relations approaches can lead to prediction distributions, the Bayesian approach is more sound in statistical theory. This book, therefore, deals with the derivation problems of prediction distributions for some widely used linear models having Student-t errors under the Bayesian approach. Results reveal that our models are robust and the Bayesian approach is competitive with traditional methods. In perturbation analysis, process control, optimization, classification, discordancy testing, interim analysis, speech recognition, online environmental learning and sampling curtailment studies predictive inferences are successfully used. 88 pp. English.



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