



BAYESIAN PREDICTIVE INFERENCE FOR MULTIVARIATE SIMPLE REGRESSION MODEL WITH MATRIX- T ERROR

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Abstract

The Bayesian methodology is used in this paper to derive the prediction distribution of future responses matrix for multivariate simple linear model with matrix- T error. Results reveal that the prediction distribution of future responses matrix is a matrix- T distribution with appropriate location, scale and shape parameters. The prediction distribution depends on the realized responses only through the sample regression matrix and the sample residual sum of squares and products matrix. The study model is robust and the Bayesian method is competitive with other statistical methods in the field of predictive inference. Some applications of predictive inference have also been illustrated.

Keywords and phrases: matrix- T distribution, multivariate simple regression, Bayesian method, prediction distribution, β -expectation tolerance region.

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