

A BAYESIAN APPROACH FOR MODELING INTERVAL-VALUED VARIABLES

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- **ABSTRACT:** *This paper proposes two Bayesian approaches to estimate the regression model coefficients considering interval-valued variables as response and explanatory variables. The first approach considers a more simple co-variance structure, while the second approach supposes a more general co-variance structure. The posterior distribution for the parameters was approximated considering Markov Chain Monte Carlo method (MCMC). A simulation study is presented and suggests the effectiveness of the sampling scheme in recovering the true values of the parameters and also indicates convergence of the parameter estimate algorithm. The new approaches are applied to real interval-valued data sets and their performance compared.*
- **KEYWORDS:** *Interval variables; regression; MCMC; Bayesian approach.*

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