

Bayesian Reliability of Weibull Regression with Type-I Censored Data

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Abstract : In the Bayesian, we developed an approach by using non-informative prior with covariate and obtained by using Gauss quadrature method to estimate the parameters of the covariate and reliability function of the Weibull regression distribution with Type-I censored data. The maximum likelihood seen that the estimators obtained are not available in closed forms, although they can be solved it by using Newton-Raphson methods. The comparison criteria are the MSE and the performance of these estimates are assessed using simulation considering various sample size, several specific values of shape parameter. The results show that Bayesian with non-informative prior is better than Maximum Likelihood Estimator.

Keywords : non-informative prior, Bayesian method, type-I censoring, Gauss quadrature

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