

Bayesian Estimation of Reliability Function of Pareto Distribution under Different Loss Functions

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Abstract

The main purpose of this study is to discuss MLE and Bayesian estimation of shape parameters and reliability function of Pareto distribution under different loss functions. The expressions for the risk function under the squared error loss function, quadratic loss function, and asymmetric precautionary loss function for different priors are also obtained. Analysis of simulated data and a real data set is also presented for illustrative purposes.

Keywords: Bayes estimator, Maximum likelihood Estimator, Reliability function, Prior Function, Shape parameter, Squared error loss function, Quadratic loss function, Asymmetric precautionary loss function.