Classical and Bayesian Analysis for Inverse Weibull Distribution with its Applications: A Comparative Study

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Abstract—In this paper Inverse Weibull Distribution is considered. For parameter estimation, classical Maximum Likelihood method of estimation and Bayesian method of estimation are used. In Bayesian methodology, different prior distributions are employed under various loss functions to estimate the parameters of Inverse Weibull Distribution. The simulation study is conducted in R-Software to compare these methods by using mean square error with varying sample sizes.

Also the real life applications are examined. The comparison is also done among the different loss functions.

Keywords: Inverse Weibull Distribution, Prior distributions, Posterior Distributions, Loss functions, Simulation study.