

Estimation of stress-strength parameter for a new Weibull distribution

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This paper deals with the estimation of $R = P\{X < Y\}$, where X and Y are independent random variables from Peng-Yan Extended Weibull distribution. The MLE of R , its asymptotic distribution and confidence interval based on it, as well as exact confidence interval are obtained. The procedure for deriving bootstrap-p confidence interval is presented. The UMVUE of R and UMVUE of its variance are derived. The Bayes estimator of R is obtained. A simulation study is performed in order to compare these estimators.

References

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