Abstract

The linear exponential distribution is a very well-known distribution for modeling lifetime data in reliability and medical studies. We introduce in this paper a new four-parameter generalized version of the transmuted generalized linear exponential distribution. We provide a comprehensive account of the mathematical properties of the new distributions. In particular, A closed-form expressions for the density, cumulative distribution, quantile and median of the distribution is given. Also, the rth order moment and moment generating function are derived. The maximum likelihood estimation of the unknown parameters is discussed. Real data are used to determine whether the TGLED is better than other well-known distributions in modeling lifetime data or not.

References

Transmuted Generalized Linear Exponential Distribution


**Index Terms**

Computer Science

Applied Mathematics

**Keywords**

Transmuted generalized linear exponential distribution quantile and median
Maximum likelihood estimation
Moments.