THE ALPHA POWER EXTENDED GENERALIZED EXPONENTIAL DISTRIBUTION

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Abstract

This article proposes the alpha power extended generalized exponential distribution. This distribution is a unique case of the alpha power family of distribution with a generalization of the exponential distribution. The statistical properties of the proposed distribution such as survival function, hazard function, cumulative distribution function, moment generating function, kurtosis, skewness, order statistics, odd function, cumulative function, reversed hazard, entropy and quantile are established. The parameters estimate of the proposed distribution were obtained by maximum likelihood method. The flexibility of the propose distribution was examined using two real life datasets. The goodness of fit of the proposed model indicates that the new distribution performed better than some existing distributions.