Abstract

A generalization of the Inverse flexible Weibull distribution so-called the Kumaraswamy-Inverse flexible Weibull distribution is proposed and studied. Various structural properties including explicit expressions for the moments, quantiles and moment generating function of the new distribution are derived. The estimation of the model parameters is performed by maximum likelihood method and the observed Fisher’s information matrix is derived. For different values of sample sizes, Monte Carlo simulation is performed to investigate the precision of the maximum likelihood estimates. The usefulness of the Kumaraswamy inverse flexible distribution for modeling data is illustrated using real data.

References


Index Terms

Computer Science

Information Sciences

Keywords

Flexible Weibull Distribution; Kumaraswamy-G Class; Hazard Function; Maximum Likelihood; Reliability.