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The gamma-exponentiated exponential distribution

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Abstract

In this paper, we introduce a new distribution generated by gamma random variables. We show that this distribution includes as a special case the distribution of the lower record value from a sequence of i.i.d. random variables from a population with the exponentiated (generalized) exponential distribution. The properties of this distribution are derived and the estimation of the model parameters is discussed. Some applications to real data sets are finally presented for illustration.

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generalized exponential distribution

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lower record values

gamma-generated distribution

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