

## Objective analysis for generalized exponential distribution based on records with applications

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**Abstract.** This work examines an objective Bayesian analysis for Generalized exponential distribution parameters using record data. Focus was specifically on the objective priors within the record framework, including the probability matching priors, Jeffrey's prior, maximal data information (MDI) prior, and reference prior. Taking into account each prior in turn, the suitability of posterior is carefully analyzed. The estimator with the best performance indicators is found through a simulated research. Also, in this research, we study the application of Bayesian point predictors of order statistics from a future sample, which are based on the values of the  $k$ th lower record from a generalized exponential distribution. Lastly, we used an actual set of data to apply all methodologies that were provided.

**Keywords:** objective priors, interval prediction, point prediction, order statistics,  $k$ th record values, generalized exponential distribution.

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