Package 'tailcdf'

November 12, 2026

Title Tail Extrapolation from Truncated Cumulative Event Curves

Version 0.1.0

Description Fits parametric distributions to right-truncated event times using maximum likelihood estimation. Estimates the eventual total number of events, observed completeness, empirical likelihood-envelope bounds, and times to reach specified percentages of the eventual total.

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Encoding UTF-8

RoxygenNote 7.3.3

Suggests flexsurv, testthat (>= 3.0.0)

Config/testthat/edition 3

URL https://github.com/viakovlev/tailcdf

BugReports https://github.com/viakovlev/tailcdf/issues

NeedsCompilation no

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Repository CRAN

Date/Publication 2026-11-12 19:00:02 UTC

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`tailfit` *Fit an MLE tail model to right-truncated event times*

Description

Fit an MLE tail model to right-truncated event times

Usage

```
tailfit(
  x,
  dists = c("lnorm", "gamma", "weibull", "chisq", "f"),
  envelope_expansion = 1,
  n_starts = 10,
  n_starts_bounds = max(80, 8 * n_starts),
  seed = 1,
  pcts = c(0.6, 0.7, 0.8, 0.9),
  ...
)
```

Arguments

`x`	Numeric vector of strictly positive event times.
`dists`	Candidate distributions. Default: lnorm, gamma, weibull, chisq, f.
`envelope_expansion`	Bound width multiplier. 1.0 is the standard E100 bound.
`n_starts`	Multistarts for best-fit optimization.
`n_starts_bounds`	Multistarts for bound optimization.
`seed`	Random seed.
`pcts`	Probabilities for reporting times to fractions of total expected events.
`...`	Ignored compatibility arguments.

Value

Object of class tailfit.

Examples

```
set.seed(123)
x <- rweibull(100, shape = 2, scale = 10)
x <- x[x <= 12]
fit <- tailfit(x, dists = 'weibull', n_starts_bounds = 10)
fit$maxFnInf_best
fit$pct_complete_best
```

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