Package: minsample1 (via r-universe)

September 17, 2024

Type Package

Title The Minimum Sample Size

Version 0.1.0

Description Using this package, one can determine the minimum sample size required so that the absolute deviation of the sample mean and the population mean of a distribution becomes less than some pre-determined epsilon, i.e. it helps the user to determine the minimum sample size required to attain the pre-fixed precision level by minimizing the difference between the sample mean and population mean.

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Encoding UTF-8

RoxygenNote 7.2.1

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

Config/testthat/edition 3

VignetteBuilder knitr

NeedsCompilation no

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Repository https://anik4322.r-universe.dev

RemoteUrl https://github.com/cran/minsample1

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l_exp   *Prints the minimum size of the sample required to get epsilon neighborhood for given value of epsilon for Exponential Distribution*

Description

This package helps determining the minimum sample size required to attain some pre-fixed precision level.

Usage

```
l_exp(n, eps, theta = 1)
```

Arguments

n	a vector of proposed sample size
eps	a vector of the precision level
theta	the parameter for the underlying distribution, here Exponential Distribution

Details

in any distribution for a large sample the mean-squared error gradually tends to zero, the minimum number depends on the precision level i.e. the pre-fixed eplison.

Value

report: the data frame containing the minimum value of the sample size corresponding to the pre-fixed epsilon

References

Methods for this process is described in A.M.Gun,M.K.Gupta,B.Dasgupta(2019,ISBN:81-87567-81-3).

Examples

```
l_exp(1:5,0.5,1)
```

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l_norm	*Prints the minimum size of the sample required to get epsilon neighborhood for given value of epsilon for Normal Distribution*

Description

This package helps determining the minimum sample size required to attain some pre-fixed precision level

Usage

```
l_norm(n, eps, mu = 0, sigma = 1)
```

Arguments

n	a vector of proposed sample size
eps	a vector of the precision level
mu	the location parameter for the underlying distribution, here normal distribution(mean)
sigma	the scale parameter for the underlying distribution, here normal distribution(standard deviation)

Details

in any distribution for a large sample, the absolute error gradually tends to zero, the minimum number depends on the precision level i.e. the pre-fixed eplison

Value

report: the data frame containing the minimum value of the sample size corresponding to the pre-fixed epsilon

References

Methods for this process is described in A.M.Gun,M.K.Gupta,B.Dasgupta(2019,ISBN:81-87567-81-3).

Examples

```
l_norm(1:5,0.5,3,1)
```

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