## Package ‘minsple1’

November 1, 2022

<table>
<thead>
<tr>
<th>Type</th>
<th>Package</th>
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<tbody>
<tr>
<td>Title</td>
<td>The Minimum Sample Size</td>
</tr>
<tr>
<td>Version</td>
<td>0.1.0</td>
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<tr>
<td>Description</td>
<td>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.</td>
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<td>License</td>
<td>GPL-3</td>
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<td>Encoding</td>
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<tr>
<td>RoxygenNote</td>
<td>7.2.1</td>
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<tr>
<td>Suggests</td>
<td>knitr, rmarkdown, testthat (&gt;= 3.0.0)</td>
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<tr>
<td>Config/testthat/edition</td>
<td>3</td>
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<tr>
<td>VignetteBuilder</td>
<td>knitr</td>
</tr>
<tr>
<td>NeedsCompilation</td>
<td>no</td>
</tr>
<tr>
<td>Author</td>
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<td>Maintainer</td>
<td>Anik Paul <a href="mailto:paulanik2019@gmail.com">paulanik2019@gmail.com</a></td>
</tr>
<tr>
<td>Repository</td>
<td>CRAN</td>
</tr>
<tr>
<td>Date/Publication</td>
<td>2022-11-01 14:17:40 UTC</td>
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### R topics documented:

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<th>l_exp</th>
<th>l_norm</th>
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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**

```r
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 epsilon.

**Value**

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

**References**


**Examples**

```r
l_exp(1:5,0.5,1)
```
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 epsilon.

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

References

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