

Package ‘mcreplicate’

March 23, 2021

Description Multi-core replication function to make it easier to do fast Monte Carlo simulation. Based on the mcreplicate() function from the 'rethinking' package. The 'rethinking' package requires installing 'rstan', which is onerous to install, while also not adding capabilities to this function.

Title Multi-Core Replicate

Version 0.1.1

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Imports parallel

License AGPL (>= 3)

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

Suggests testthat (>= 3.0.0), covr

Config/testthat/edition 3

NeedsCompilation no

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mc_replicate	<i>Multi-core replicate.</i>
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Description

Multi-core replicate.

Usage

```
mc_replicate(n, expr, refresh = 0.1, mc.cores = 2)
```

Arguments

n	integer: the number of replications.
expr	the expression (a language object, usually a call) to evaluate repeatedly.
refresh	status update refresh interval
mc.cores	number of cores to use

Value

A vector, matrix, or list of length n.

Source

Modified from: Richard McElreath (2020). *rethinking*: Statistical Rethinking book package. R package version 2.13. <https://github.com/rmcelreath/rethinking>

Examples

```
one_sim <- function(n, control_prob, rel_effect) {  
  treat_prob <- control_prob + (control_prob * rel_effect)  
  cy <- rbinom(n = n, size = 1, prob = control_prob)  
  ty <- rbinom(n = n, size = 1, prob = treat_prob)  
  mean(ty) - mean(cy)  
}  
  
mc_replicate(10, one_sim(n = 100, control_prob = 0.1, rel_effect = 0.01))
```

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