

Package ‘simSummary’

February 20, 2015

Title Simulation summary

Description simSummary is a small utility package which eases the process of summarizing simulation results. Simulations often produce intermediate results - some focal statistics that need to be summarized over several scenarios and many replications. This step is in principle easy, but tedious. The package simSummary fills this niche by providing a generic way of summarizing the focal statistics of simulations. The user must provide properly structured input, holding focal statistics, and then the summary step can be performed with one line of code, calling the simSummary function.

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License GPL (>= 2)

Version 0.1.0

Depends abind (>= 1.4-0), svUnit (>= 0.7-5)

Imports gdata (>= 2.8.0)

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simSummary-package *Simulation summary*

Description

simSummary is a small utility package that eases the process of summarizing simulation results. Simulations often produce intermediate results - some focal statistic(s), that need to be summarized over many replicates. simSummary eases the process of summarizing these focal statistics.

Details

Package: simSummary
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Maintainer: Gregor Gorjanc <gregor.gorjanc@bf.uni-lj.si>
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Author(s)

Gregor Gorjanc

simSummary *Simulation summary*

Description

simSummary eases the process of summarizing simulation results. Simulations often produce some intermediate results (some focal statistic(s)), that need to be summarized over many simulation replicates. simSummary helps with summarizing these focal statistics.

Usage

```
simSummary(x,  
FUN = c("length",  
"nobs",  
"mean",  
"sd",
```

```
"min",
"max"),
...)
```

Arguments

x	an (outer) list of (inner) lists, where each inner list has exactly the same structure (see examples)
FUN	character, summary statistics function names
...	arguments passed to summary functions

Details

simSummary accepts as input an (outer) list of (inner) lists, where all inner lists must have the same structure and only scalars, vectors, matrices, and arrays can be used in inner lists. Function combines all inputs in a list of arrays and summarizes array values with specified functions that can work on vector like inputs.

Value

The return element is also a list (outer) of lists (inner), where each inner list has the same structure as inner lists of input, but holding one of the summary statistics - one summary statistics per one inner list.

Author(s)

Gregor Gorjanc

Examples

```
## Create simple input from a rather silly simulation
simFun <- function(x)
{
  ret <- list()
  ret$s <- rnorm(n=1)
  ret$v <- rnorm(n=5)
  ret$m <- matrix(rnorm(n=5*5), nrow=5, ncol=5)
  ret$a <- array(rnorm(n=4*3*2), dim=c(4, 3, 2))
  ret
}
sim <- list()
sim$sim1 <- simFun()
sim$sim2 <- simFun(x=0)
sim$sim3 <- simFun(x=1)

## Simulation summary (just mean and standard deviation)
simSummary(x=sim, FUN=c("mean", "sd"))

## Can handle simulations in process too = handle NA values
sim$sim3$s <- NA
```

```
sim$sim3$v[5] <- NA
simSummary(x=sim, FUN="mean")
simSummary(x=sim, FUN="mean", na.rm=TRUE)

## Unit tests (automatic run elsewhere)
## summary(runTest(test(simSummary)))
```

simSummary_unitTests *Run unit tests for package simSummary*

Description

Package **simSummary** has unit tests to test the validity of code behaviour. Any developer or user can easily run these tests as shown in examples below.

Usage

```
simSummary_unitTests()
```

Author(s)

Gregor Gorjanc

Examples

```
## Run unit tests for package simSummary
simSummary_unitTests()
```

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