Package: WRShd (via r-universe)

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Type Package

Title An Experimental Refactor of the Harrell-Davis Estimate Functions from R. R. Wilcox' Robust Statistics Package ``WRS''

Version 0.1

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Description This package is an experimental refactored version of the ``WRS'' package, which implements R. R. Wilcox' the robust statistics functions. The package currently focuses on implementing functions related to the Harrell-Davis estimator.

License GPL (>= 2)

Suggests testthat, parallel, WRS

Imports Rcpp (>= 0.11.3), RcppArmadillo(>= 0.4.400.0)

LinkingTo Rcpp, RcppArmadillo

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Contents

hd — *Compute the Harrell-Davis estimate of the qth quantile*

Description

Compute the Harrell-Davis estimate of the qth quantile

Usage

```
hd(x, q = 0.5, na.rm = TRUE, cores = 1)
```

Arguments

`x`	a numeric `vector`
`q`	a desired quantile
`na.rm`	a logical indicating whether missing values should be checked for removal
`cores`	a number of cores used for computation

Value

the Harrell-Davis estimate of the qth quantile of `x`

hdci — *Compute a 1-`alpha` confidence for the Harrell-Davis estimate of the qth quantile*

Description

Compute a 1-`alpha` confidence for the Harrell-Davis estimate of the qth quantile

Usage

```
hdci(x, q = 0.5, alpha = 0.05, nboot = 100, SEED = TRUE, pr = TRUE,
  cores = 1)
```

Arguments

`x`	a numeric `vector`
`q`	a desired quantile
`alpha`	a significance level
`nboot`	a number of bootstraps
`SEED`	a logical indicating whether the seed should be set
`pr`	a logical indicating whether
`cores`	a number of cores used for computation

Value

the 1-alpha confidence for the Harrell-Davis estimate of the qth quantile

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hdpb — *Compute a bootstrap 1-alpha confidence for the Harrell-Davis estimate of the qth quantile*

Description

Compute a bootstrap 1-alpha confidence for the Harrell-Davis estimate of the qth quantile

Usage

```
hdpb(x, q = 0.5, alpha = 0.05, nboot = 2000, SEED = TRUE, nv = 0,
  cores = 1)
```

Arguments

x	a numeric vector
q	a desired quantile
alpha	a significance level
nboot	a number of bootstraps
SEED	a logical indicating whether the seed should be set
nv	a null-value when computing a p-value
cores	a number of cores used for computation

Value

the a bootstrap 1-alpha confidence for the Harrell-Davis estimate of the qth quantile

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hdseb — *Compute a bootstrap standard error of the Harrell-Davis estimate of the qth quantile*

Description

Compute a bootstrap standard error of the Harrell-Davis estimate of the qth quantile

Usage

```
hdseb(x, q = 0.5, nboot = 100, SEED = TRUE, cores = 1)
```

Arguments

`x`	a numeric `vector`
`q`	a desired quantile
`nboot`	a number of bootstraps
`SEED`	a logical indicating whether the seed should be set
`cores`	a number of cores used for computation

Value

the standard error of the Harrell-Davis estimate of the qth quantile

`qcomhd` *Compare quantiles via the Harrell-Davis estimator*

Description

Compare quantiles via the Harrell-Davis estimator

Usage

```
qcomhd(x, y, q = c(0.1, 0.25, 0.5, 0.75, 0.9), nboot = 2000,
  plotit = TRUE, SEED = TRUE, xlab = "Group 1", ylab = "Est.1-Est.2",
  alpha = 0.05, cores = 1)
```

Arguments

`x`	a numeric `vector`
`y`	a numeric `vector`
`q`	a desired quantile
`nboot`	a number of bootstraps
`plotit`	a logical indicating whether plotting the result
`SEED`	a logical indicating whether the seed should be set
`xlab`	a string of x-axis label
`ylab`	a string of y-axis label
`alpha`	a significance level
`cores`	a number of cores used for computation

qcomhdMC — *Compare quantiles via the Harrell-Davis estimator*

Description

Compare quantiles via the Harrell-Davis estimator

Usage

```
qcomhdMC(x, y, q = c(0.1, 0.25, 0.5, 0.75, 0.9), nboot = 2000,
  plotit = TRUE, SEED = TRUE, xlab = "Group 1", ylab = "Est.1-Est.2",
  alpha = 0.05, cores = -1)
```

Arguments

x	a numeric vector
y	a numeric vector
q	a desired quantile
nboot	a number of bootstraps
plotit	a logical indicating whether plotting the result
SEED	a logical indicating whether the seed should be set
xlab	a string of x-axis label
ylab	a string of y-axis label
alpha	a significance level
cores	a number of cores used for computation

WRShd — *WRShd*

Description

An Experimental Refactor of the Harrell-Davis Estimate Functions from R. R. Wilcox' Robust Statistics Package "WRS"

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Index