Package ‘fastlogranktest’

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Type Package

Title A Fast Way to Calculate the p-Value of One or Multiple Log-Rank-Tests

Version 0.1.1

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Description It is for all people who have to compute many Log-Rank-Tests and the 'survival' package is not fast enough for their purpose. Therefore this small package provides two functions, one for a single Log-Rank-Test and another which calculates many Log-Rank-Tests at a time using threading. Both runs very fast because it uses C++ code with 'Rcpp'.

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URL https://github.com/compsysmed/fastlogranktest.git

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

LinkingTo Rcpp, BH

Imports Rcpp

Suggests testthat (>= 2.1.0)

NeedsCompilation yes

Repository CRAN

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logrank_test  Calculate the Log-Rank-Test very fast

Description

Calculate the Log-Rank-Test very fast

Usage

logrank_test(groupa, groupb, groupacensored, groupbcensored)

Arguments

- groupa: vector of group a’s survival times
- groupb: vector of group b’s survival times
- groupacensored: vector of censored information of group a’s survival times
- groupbcensored: vector of censored information of group b’s survival times

Value

p-value

Examples

T1 <- c(6, 6, 6, 7, 9, 10, 11, 13, 16, 17, 19, 20, 22, 23, 25, 32, 32, 34, 35)
E1 <- c(1, 1, 1, 0, 1, 0, 1, 0, 0, 1, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0)
T2 <- c(1, 1, 2, 2, 3, 4, 4, 5, 5, 8, 8, 8, 8, 11, 11, 12, 12, 15, 17, 22, 23)
E2 <- c(1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1)
logrank_test(T1,T2,E1,E2)
# 4.168809e-05

multi_logrank_test  Calculate multiple Log-Rank-Tests very fast

Description

Calculate multiple Log-Rank-Tests very fast

Usage

multi_logrank_test(groupas, groupbs, groupacensoreds, groupbcensoreds,
threadnumber = NULL)
multi_logrank_test

Arguments

groupas list of vectors of groupa’s survival times
groupbs list of vectors of groupb’s survival times
groupacensoreds list of vectors of censored information of groupa’s survival times
groupbcensoreds list of vectors of censored information of groupb’s survival times

current number (optional) set the number of threads used for this function

Value

vector of p-values (same order as input)

Examples

T1 <- c(6, 6, 6, 7, 9, 10, 11, 13, 16, 17, 19, 20, 22, 23, 25, 32, 32, 34, 35)
E1 <- c(1, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0)
T2 <- c(1, 1, 2, 2, 3, 4, 5, 5, 8, 8, 8, 8, 11, 11, 12, 12, 15, 17, 22, 23)
E2 <- c(1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1)
t1s<-list(T1, T1, T1)
e1s<-list(E1, E1, E1)
t2s<-list(T2, T2, T2)
e2s<-list(E2, E2, E2)
multi_logrank_test(t1s,t2s,e1s,e2s)
# 4.168809e-05 4.168809e-05 4.168809e-05
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