Package ‘covequal’

October 12, 2022

Type Package

Title Test for Equality of Covariance Matrices

Version 0.1.0

Description Computes p-values using the largest root test using
an approximation to the null distribution by Johnstone (2008) <DOI:10.1214/08-AOS605>.

Depends R (>= 3.0.0)

Imports RMTstat, stats, corpcor

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LazyData true

URL http://github.com/turgeonmaxime/covequal

BugReports http://github.com/turgeonmaxime/covequal/issues

Suggests testthat, covr

RoxygenNote 6.0.1

NeedsCompilation no

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test_covequal *Test for equality of covariance matrices*

Description

Uses Roy's union-intersection principle for testing for equality of covariance matrices between two samples. Also provides p-values.

Usage

```
test_covequal(X, Y, inference = c("TW", "permutation"), nperm)
```

Arguments

X	matrix of size n1 x p
Y	matrix of size n2 x p
inference	Method for computing p-value.
nperm	Number of permutations. See details.

Value

A list containing the test statistic and the p-value.

Examples

```
X <- matrix(rnorm(50*100), ncol = 100)
Y <- matrix(rnorm(40*100), ncol = 100)
test_covequal(X, Y, inference = "TW", nperm = 10)
```

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