Package 'concordancer'

July 21, 2023

Title An 'Rcpp' Implementation of Lin's Concordance Correlation Coefficient (CCC)

Version 1.0.2

Description Lin's Concordance Correlation Coefficient (CCC) is a statistic which measures the degree of agreement between two variables. The CCC is useful for assessing (i) the measurement agreement between two variables (typically outputs between two devices); (ii) the reproducibility between two measurements obtained from the same device; and (iii) inter-rater reliability. The 'concordancer' package provides a 'C++' implementation of Lin's CCC via 'Rcpp'. In so doing, the ccc() function contained herein is a much faster implementation than those contained in other R packages. For more details on Lin's CCC, please see <https://en.wikipedia.org/wiki/Concordance_correlation_coefficient>.

License GPL (>= 3)

URL https://github.com/troyjcross/concordancer

BugReports https://github.com/troyjcross/concordancer/issues

Imports Rcpp

LinkingTo Rcpp

Encoding UTF-8

RoxygenNote 7.2.3

Suggests spelling

Language en-US

NeedsCompilation yes

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Repository CRAN

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R topics documented:

`concordancer-package` *A short title line describing what the package does*

Description

A more detailed description of what the package does. A length of about one to five lines is recommended.

Details

This section should provide a more detailed overview of how to use the package, including the most important functions.

Author(s)

Your Name, email optional.

Maintainer: Your Name <your@email.com>

References

This optional section can contain literature or other references for background information.

See Also

Optional links to other man pages

Examples

```
  ## Not run:
     ## Optional simple examples of the most important functions
     ## These can be in \dontrun{} and \donttest{} blocks.

## End(Not run)
```

ccc *An Rcpp implementation of Lin's Concordance Correlation Coefficient (CCC)*

Description

This `ccc()` function leverages the speed of C++ to implement Lin's Concordance Correlation Coefficient (CCC) via Rcpp. This implementation is faster than other varieties of CCC calculation from other packages, i.e., `DescTools::CCC()` and `epiR::epi.ccc()`.

Usage

```
ccc(x, y)
```

Arguments

x	A numeric vector containing x.
y	A numeric vector containing y.

Details

For more details on the calculation of the CCC, see: https://en.wikipedia.org/wiki/Concordance_correlation_coefficient

Value

A numeric scalar representing the CCC between x and y.

Examples

```
# Create x and y vectors
x <- rnorm(100, sd = 1)
y <- rnorm(length(x), sd = 0.2)

# Calculate CCC between x and y
ccc(x,y)
```

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