Package ‘intrinsicKappa’

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Title Sample Size Planning Based on Intrinsic Kappa Value
Version 0.1
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Description Kappa statistics is one of the most used methods to evaluate the effectiveness of inspections based on attribute assessments in industry. However, its estimation by available methods does not provide its “real” or “intrinsic” value. This package provides functions for the computation of the intrinsic kappa value as it is described in: Rafael Sanchez-Marquez, Frank Gerhorst and David Schindler (2023) “Effectiveness of quality inspections of attributive characteristics – A novel and practical method for estimating the “intrinsic” value of kappa based on alpha and beta statistics.” <doi:10.1016/j.cie.2023.109006>.
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intrinsicKappa-package

Sample Size Planning Based on Intrinsic Kappa Value

Description

Providing functions for the computation of the intrinsic kappa value.

Author(s)

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References


See Also

For the computation of the intrinsic kappa value, see intrinsicKappa.

computeStat

Compute Statistics

Description

Compute Statistics

Usage

computeStat(n1, n2, alpha)

Arguments

<table>
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<tr>
<th>n1</th>
<th>integer</th>
<th>n2</th>
<th>integer</th>
<th>alpha</th>
<th>one-sided significance level</th>
</tr>
</thead>
</table>
Description

Intrinsic Kappa

Usage

intrinsicKappa(M, alpha = 0.05, alpha_adjusted = TRUE)

Arguments

M        matrix to be assessed
alpha    one-sided significance level
alpha_adjusted    logical, whether the significance level shall be adjusted

Details

Computation of intrinsic kappa with a dichotomous response and known relation of the input frequencies.

Value

Intrinsic kappa value

References


Examples

M <- matrix(c(2375, 25, 10, 2390), ncol = 2)
rownames(M) <- c('ok-rating', 'nok-rating')
colnames(M) <- c('ok-standard', 'nok-standard')
alpha <- 0.05
alpha_adjusted <- FALSE
intrinsicKappa(M, alpha, alpha_adjusted)
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