

Package ‘EvalTest’

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Title A 'shiny' App to Evaluate Diagnostic Tests Performance

Version 1.0.2

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Description

Evaluate diagnostic test performance using data from laboratory or diagnostic research. It supports both binary and continuous test variables. It allows users to compute key performance indicators and visualize Receiver Operating Characteristic (ROC) curves, determine optimal cut-off thresholds, display confusion matrix, and export publication-ready plot. It aims to facilitate the application of statistical methods in diagnostic test evaluation by healthcare professionals. The methodology used to compute the performance indicators follows the overview described by Habibzadeh (2025) <[doi:10.11613/BM.2025.010101](https://doi.org/10.11613/BM.2025.010101)>. Thanks to 'shiny' package.

Depends R (>= 4.2.1)

Imports DT, ggplot2, ggpubr, openxlsx, pROC, readxl, shiny, shinydashboard, stats, binom

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Encoding UTF-8

RoxygenNote 7.3.2

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

NeedsCompilation no

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compute_indicators	<i>Compute diagnostic test indicators</i>
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Description

This function computes sensitivity, specificity, predictive values, likelihood ratios, accuracy, and Youden index with confidence intervals based on a 2x2 table of diagnostic test results.

Usage

```
compute_indicators(tp, fp, fn, tn, prev, conf = 0.95)
```

Arguments

tp	True positives
fp	False positives
fn	False negatives
tn	True negatives
prev	Prevalence (numeric between 0 and 1)
conf	Confidence level (default 0.95)

Value

A list with all diagnostic indicators and confidence intervals

Examples

```
compute_indicators(50, 10, 5, 100, prev = 0.1)
```

run_app	<i>Launch the EvalTest Shiny application</i>
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Description

This function starts the Shiny application included in the EvalTest package, which aims to evaluate diagnostic tests performance.

Usage

```
run_app()
```

Value

The function does not return a value; it launches a Shiny application.

Examples

```
if (interactive()) {  
  library(EvalTest)  
  run_app()  
}
```

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