

Package ‘rmerec’

July 23, 2025

Type Package

Title MEREC - Method Based on the Removal Effects of Criteria

Version 0.1.1

Maintainer Lucas Sebastião de Paula <lucas@ime.eb.br>

Description Implementation of the MEthod based on the Removal Effects of Criteria - MEREC- a new objective weighting method for determining criteria weights for Multiple Criteria Decision Making problems, created by Mehdi Keshavarz-Ghorabae (2021) <[doi:10.3390/sym13040525](https://doi.org/10.3390/sym13040525)>. Given a decision matrix, the function return the Merec’s weight vector and all intermediate matrix/vectors used to calculate it.

License GPL (>= 3)

URL <https://github.com/lucassp/rmerek>

Imports utils

Language en-US

Encoding UTF-8

RoxygenNote 7.2.3

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

Author Lucas Sebastião de Paula [aut, cre] (ORCID: <<https://orcid.org/0000-0002-2522-6538>>),
Bernardo Silva [ctb] (ORCID: <<https://orcid.org/0000-0003-1466-3393>>),
Marcos Santos [ctb] (ORCID: <<https://orcid.org/0000-0003-1533-5535>>)

Repository CRAN

Date/Publication 2024-02-08 16:40:02 UTC

Contents

merec_weights	2
Index	3

merek_weights	<i>Method based on the Removal Effects of Criteria - MEREC Implementation of the Method based on the Removal Effects of Criteria - MEREC More information about the method at https://doi.org/10.3390/sym13040525 More information about the implementation at https://github.com/lucassp/rmerek Given a decision matrix, the function return the Meref weight 's vector.</i>
---------------	---

Description

Method based on the Removal Effects of Criteria - MEREC Implementation of the Method based on the Removal Effects of Criteria - MEREC More information about the method at <https://doi.org/10.3390/sym13040525> More information about the implementation at <https://github.com/lucassp/rmerek> Given a decision matrix, the function return the Meref weight 's vector.

Usage

```
merek_weights(data, alternatives, optimizations)
```

Arguments

data	A numeric data matrix in the format of a DECISION MATRIX, columns are the criteria, rows are the alternatives
alternatives	A character vector with the identification of alternatives
optimizations	A character vector with definition of minimization or maximization for each criterion, expected 'min' or 'max' only

Value

A numeric vector with MEREC Weights (w_j) and all matrix/vectors used to calculate it

Examples

```
alternatives <- c("A1", "A2", "A3", "A4", "A5")
optimizations <- c("max", "max", "min", "min")

data <- matrix(c(
  c(450, 10, 100, 220, 5),           # criterion 1 values
  c(8000, 9100, 8200, 9300, 8400),  # criterion 2 values
  c(54, 2, 31, 1, 23),              # criterion 3 values
  c(145, 160, 153, 162, 158)        # criterion 4 values
), nrow=5, ncol=4)

result <- merek_weights(data, alternatives, optimizations)
```

Index

merrec_weights, [2](#)