Package: createLogicalPCM (via r-universe)

October 17, 2024

Type Package

Title Create Logical Pairwise Comparison Matrix for the Analytic Hierarchy Process

Version 0.1.0

Description Create Pairwise Comparison Matrices for use in the Analytic Hierarchy Process. The Pairwise Comparison Matrix created will be a logical matrix, which unlike a random comparison matrix, is similar to what a rational decision maker would create on the basis of a preference vector for the alternatives considered.

License GPL-3

Encoding UTF-8

RoxygenNote 7.1.2

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

Language en-US

VignetteBuilder knitr

Config/testthat/edition 3

NeedsCompilation no

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Contents

createLogicalPCM *Simulated Logical Pairwise Comparison Matrix for Analytic Hierarchy Process*

Description

Creates a logical pairwise comparison matrix for the Analytic Hierarchy Process such as would be created by a rational decision maker based on a relative vector of preferences for the alternatives involved. Choices of the pairwise comparison ratios are from the Fundamental Scale and simulate a reasonable degree of error. The algorithm is modified from a paper by Bose, A [2022], doi: 10.1002/mcda.1784

Usage

```
createLogicalPCM(ord, prefVec = rep(NA, ord))
```

Arguments

ord	The desired order of the Pairwise Comparison Matrix
prefVec	The preference vector of length as the order of the input matrix ' @return A Logical Pairwise Comparison Matrix

Examples

```
lPCM <- createLogicalPCM(3,c(1,2,3));
lPCM <- createLogicalPCM(5,c(0.25,0.4,0.1,0.05,0.2));
```

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