

Package ‘oottest’

July 22, 2025

Type Package

Title Out-of-Treatment Testing

Version 0.9.1

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Description Implements the out-of-treatment testing from Kuelpmann and Kuzmics (2020) <[doi:10.2139/ssrn.3441675](https://doi.org/10.2139/ssrn.3441675)> based on the Vuong Test introduced in Vuong (1989) <[doi:10.2307/1912557](https://doi.org/10.2307/1912557)>. Out-of treatment testing allows for a direct, pairwise likelihood comparison of theories, calibrated with pre-existing data.

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Encoding UTF-8

LazyData true

RoxygenNote 7.1.2

Suggests knitr, rmarkdown, xtable, testthat (>= 3.0.0), covr

Config/testthat/edition 3

Depends R (>= 3.5.0)

URL <https://github.com/PhilippKuelpmann/oottest>

BugReports <https://github.com/PhilippKuelpmann/oottest/issues>

VignetteBuilder knitr

NeedsCompilation no

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data_three_action_games
<i>Data from the three-action games</i>

Description

This is the choice data from Kuelpmann and Kuzmics (2022) for the three-action games, i.e., Hawk-Middle-Dove and Rock-Paper-Scissor. For an explanation of the different treatments and the games, please refer to the paper.

Usage

data_three_action_games

Format

- Need to reformat anyway ...
- rows** actions
- columns** treatments
- cells** number of subjects who chose each action on each treatment ...

Source

<https://homepage.univie.ac.at/philipp.kuelpmann/hdg.html>

data_two_action_games *Data from the two-action games*

Description

This is the choice data from Kuelpmann and Kuzmics (2022) for the two-action games, i.e., Hawk-Dove and Matching Pennies. For an explanation of the different treatments and the games, please refer to the paper.

Usage

data_two_action_games

Format

rows actions

columns treatments

cells number of subjects who chose each action on each treatment ...

Source

<https://homepage.univie.ac.at/philipp.kuelpmann/hdg.html>

predictions_three_action_games
 Predictions for the three-action games

Description

These are the prediction of every theory considered in Kuelpmann and Kuzmics (2022) for the three-action games. For a explanation of the different theories, treatments and the games, please refer to the paper.

Usage

predictions_three_action_games

Format

rows predicted probabilities of actions

columns treatments

tables different theories

cells probability of choosing an action on each treatment depending on the theory ...

Source

<https://homepage.univie.ac.at/philipp.kuelpmann/hdg.html>

predictions_two_action_games

Predictions for the two-action games

Description

These are the prediction of every theory considered in Kuelpmann and Kuzmics (2022) for the two-action games. For a explanation of the different theories, treatments and the games, please refer to the paper.

Usage

predictions_two_action_games

Format

rows predicted probabilities of actions

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cells probability of choosing an action on each treatment depending on the theory ...

Source

<https://homepage.univie.ac.at/philipp.kuelpmann/hdg.html>

simple_test_data

Simple Test Data

Description

This is just very simple test data, mostly used for testing and demonstration purposes.

Usage

simple_test_data

Format

A matrix with 3 rows and 2 columns

rows actions

columns treatments

cells number of subjects who chose each action on each treatment ...

vuong_matrix	<i>Getting a vuong matrix</i>
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Description

Getting a vuong matrix

Usage

```
vuong_matrix(data, theories)
```

Arguments

data	matrix rows: choices, columns: treatments
theories	list of matrices each in the same format as above

Value

Table of z-scores for all comparisons

Examples

```
vuong_matrix(data_two_action_games, predictions_two_action_games)
```

vuong_statistic	<i>Implementation of the Vuong test for our setting</i>
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Description

Implementation of the Vuong test for our setting

Usage

```
vuong_statistic(data, pred_i, pred_j)
```

Arguments

data	Data of the experiment (matrix of ints/data.frame): columns are treatments, rows are actions, values are number of subjects who chose each action on each treatment
pred_i	Model prediction for a theory (matrix of doubles/data.frame): rows are prediction of playing action 1,2,3..., columns are treatments
pred_j	Model prediction for a theory (matrix of doubles/data.frame): rows are prediction of playing action 1,2,3..., columns are treatments

Value

The z score of testing theory I against theory J, given the data

Examples

```
vuong_statistic(  
  data_two_action_games,  
  predictions_two_action_games[, , 1],  
  predictions_two_action_games[, , 2]  
)
```

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* datasets

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