# Package 'IRR2FPR'

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**Title** Computing False Positive Rate from Inter-Rater Reliability

**Version** 0.1.1

**Maintainer** František Bartoš <f.bartos96@gmail.com>

**Description**

Implements a 'Shiny Item Analysis' module and functions for computing false positive rate
and other binary classification metrics from inter-
rater reliability based on Bartoš & Martinková (2024)
<doi:10.1111/bmsp.12343>.

**URL** https://github.com/FBartos/IRR2FPR

**BugReports** https://github.com/FBartos/IRR2FPR/issues

**License** GPL-3

**Encoding** UTF-8

**Config/ShinyItemAnalysis/module** true

**Imports** shiny, mvtnorm

**RoxygenNote** 7.2.3

**NeedsCompilation** no

**Author** František Bartoš [aut, cre] (<https://orcid.org/0000-0002-0018-5573>)

**Repository** CRAN

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## R topics documented:

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```
compute_false_negative_rate
```
                                *Compute the false negative rate*

---

### Description

Compute the false negative rate based on the inter-rater reliability and the proportion of selected candidates

### Usage

```
compute_false_negative_rate(IRR, proportion_selected)
```

### Arguments

IRR                     The inter-rater reliability

proportion_selected
                        The proportion of selected candidates

### Value

The false negative rate

### Examples

```
compute_false_negative_rate(0.75, 0.10)
```

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```
compute_false_positive_rate
```
                                *Compute the false positive rate*

---

### Description

Compute the false positive rate based on the inter-rater reliability and the proportion of selected candidates

### Usage

```
compute_false_positive_rate(IRR, proportion_selected)
```

### Arguments

IRR                     The inter-rater reliability

proportion_selected
                        The proportion of selected candidates

## Value

The false positive rate

## Examples

```
compute_false_positive_rate(0.75, 0.10)
```

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compute_proportion_of_correctly_selected

*Compute the proportion of correctly selected candidates*

---

## Description

Compute proportion of correctly selected candidates based on the inter-rater reliability and the proportion of selected candidates

## Usage

```
compute_proportion_of_correctly_selected(IRR, proportion_selected)
```

## Arguments

IRR                 The inter-rater reliability

proportion_selected
                    The proportion of selected candidates

## Value

The proportion of correctly selected candidates

## Examples

```
compute_proportion_of_correctly_selected(0.75, 0.10)
```

---

compute_true_positive_rate

*Compute the true positive rate*

---

### Description

Compute the true positive rate based on the inter-rater reliability and the proportion of selected candidates

### Usage

```
compute_true_positive_rate(IRR, proportion_selected)
```

### Arguments

IRR                The inter-rater reliability

proportion_selected
                   The proportion of selected candidates

### Value

The true positive rate

### Examples

```
compute_true_positive_rate(0.75, 0.10)
```

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IRR2FPR                 *Interactive Module for Inter-Rater Reliability to False Positive Rate*
                        *Conversion*

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### Description

This module allows users to convert inter-rater reliability (IRR) to false positive rate (FPR) as described in Bartoš and Martinková (2024).

### Author(s)

František Bartoš

### References

Bartoš, F., & Martinková, P. (2024). Selecting applicants based on multiple ratings: Using binary classification framework as an alternative to inter-rater reliability. British Journal of Mathematical and Statistical Psychology. doi:10.1111/bmsp.12343

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spearman_brown_formula

*Compute IRR from the Spearman-Brown formula*

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### Description

Compute the inter-rater reliability based on the Spearman-Brown formula

### Usage

```
spearman_brown_formula(IRR_1, n_raters)
```

### Arguments

| | |
|---|---|
| IRR_1 | The inter-rater reliability of the first rater |
| n_raters | The number of raters |

### Value

The inter-rater reliability

### Examples

```
spearman_brown_formula(0.5, 3)
```

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