

# Package ‘IRR2FPR’

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

**Version** 0.1.1

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## 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](https://doi.org/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

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**Repository** CRAN

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`compute_false_negative_rate`*Compute the false negative rate*

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**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)
```

---

`compute_false_positive_rate`*Compute the false positive rate*

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**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)
```

---

```
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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