

Package ‘EvaluationMeasures’

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Type Package

Title Collection of Model Evaluation Measure Functions

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Description Provides Some of the most important evaluation measures for evaluating a model. Just by giving the real and predicted class, measures such as accuracy, sensitivity, specificity, ppv, npv, fmeasure, mcc and ... will be returned.

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EvaluationMeasures.Accuracy
EvaluationMeasures.Accuracy

Description

Accuracy of prediction

Usage

```
EvaluationMeasures.Accuracy(Real = NULL, Predicted = NULL, Positive = 1,
TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Accuracy is What fraction of our prediction is true.

By getting the predicted and real values or number of TP,TN,FP,FN return the accurarcy of model

Value

Accuracy

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.Accuracy(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

```
EvaluationMeasures.DOR
```

```
EvaluationMeasures.DOR
```

Description

DOR of prediction

Usage

```
EvaluationMeasures.DOR(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Diagnostic odds Ratio is the ratio of Positive Likelihood Ratio by Negative Likelihood Ratio

By getting the predicted and real values or number of TP,TN,FP,FN return the Diagnostic odds Ratio of model

Value

DOR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.DOR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

EvaluationMeasures.F1Score

EvaluationMeasures.F1Score

Description

F1Score of prediction

Usage

```
EvaluationMeasures.F1Score(Real = NULL, Predicted = NULL, Positive = 1,  
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

F1Score is Harmonic mean of precision and recall.

By getting the predicted and real values or number of TP,TN,FP,FN return the F1Score or F1Measure of model

Value

F1Score

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.F1Score(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

`EvaluationMeasures.FallOut`*EvaluationMeasures.FallOut*

Description

FallOut of prediction

Usage

```
EvaluationMeasures.FallOut(Real = NULL, Predicted = NULL, Positive = 1,  
    TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Fall out is Poportional of negatives that predict as positive.

By getting the predicted and real values or number of TP,TN,FP,FN return the Fall out or False Positive Rate of model

Value

FallOut

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.FallOut(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.FBMeasure

EvaluationMeasures.FBMeasure

Description

FBMeasure of prediction

Usage

```
EvaluationMeasures.FBMeasure(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL, B = 1)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |
| B | Weight of FMeasure |

Details

FBMeasure is weighted FMeasure.

By getting the predicted and real values or number of TP,TN,FP,FN return the FBMeasure of model

Value

FBMeasure

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.FBMeasure(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0),B=3)
```

EvaluationMeasures.FDR

EvaluationMeasures.FDR

Description

FDR of prediction

Usage

```
EvaluationMeasures.FDR(Real = NULL, Predicted = NULL, Positive = 1,  
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

False Discovery Rate is What fraction of positive predicted are real negative.

By getting the predicted and real values or number of TP,TN,FP,FN return the False Discovery Rate of model

Value

FDR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.FDR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.FMeasure

EvaluationMeasures.FMeasure

Description

FMeasure of prediction

Usage

```
EvaluationMeasures.FMeasure(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

FMeasure is Harmonic mean of precision and recall.

By getting the predicted and real values or number of TP,TN,FP,FN return the FMeasure or F1Score of model

Value

FMeasure

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.FMeasure(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

EvaluationMeasures.FNR

EvaluationMeasures.FNR

Description

FNR of prediction

Usage

```
EvaluationMeasures.FNR(Real = NULL, Predicted = NULL, Positive = 1,  
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

False Negative Rate is Proportional of positives that predict as negative .

By getting the predicted and real values or number of TP,TN,FP,FN return the Miss Rate or False Negative Rate of model

Value

FNR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.FNR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.FOR

EvaluationMeasures.FOR

Description

FOR of prediction

Usage

```
EvaluationMeasures.FOR(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

False Omission Rate is What fraction of negative predicted are real positive.

By getting the predicted and real values or number of TP,TN,FP,FN return the False Omission Rate of model

Value

FOR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.FOR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.FPR

EvaluationMeasures.FPR

Description

FPR of prediction

Usage

```
EvaluationMeasures.FPR(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

False Positive Rate is Poportional of negatives that predict as positive.

By getting the predicted and real values or number of TP,TN,FP,FN return the Fall out or False Positive Rate of model

Value

FPR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.FPR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.MCC

EvaluationMeasures.MCC

Description

MCC of prediction

Usage

```
EvaluationMeasures.MCC(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Matthews Correlation Coefficient is correlation coefficient between real and predicted.

Positive One means perfect prediction, Zero means random prediction, Negative one means total disagreement.

By getting the predicted and real values or number of TP,TN,FP,FN return the Matthews Correlation Coefficient of model

Value

MCC

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.MCC(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

`EvaluationMeasures.MissRate`*EvaluationMeasures.MissRate*

Description

MissRate of prediction

Usage

```
EvaluationMeasures.MissRate(Real = NULL, Predicted = NULL, Positive = 1,  
    TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Miss Rate is Proportional of positives that predict as negative .

By getting the predicted and real values or number of TP,TN,FP,FN return the Miss Rate or False Negative Rate of model

Value

MissRate

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.MissRate(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,0,0))
```

 EvaluationMeasures.NLR

EvaluationMeasures.NLR

Description

NLR of prediction

Usage

```
EvaluationMeasures.NLR(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Negative Likelihood Ratio is $(1 - \text{Sensitivity}) / \text{Specificity} = \text{PR}(T-ID+) / \text{PR}(T-ID-)$

By getting the predicted and real values or number of TP,TN,FP,FN return the Negative Likelihood Ratio of model

Value

NLR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.NLR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.NPV

EvaluationMeasures.NPV

Description

NPV of prediction

Usage

```
EvaluationMeasures.NPV(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Negative Predicted Value is What fraction of negative predicted are real negative.

By getting the predicted and real values or number of TP,TN,FP,FN return the Negative Predicted Value of model

Value

NPV

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.NPV(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.PLR

EvaluationMeasures.PLR

Description

PLR of prediction

Usage

```
EvaluationMeasures.PLR(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Positive Likelihood Ratio is $\text{Sensitivity} / (1 - \text{Specificity}) = \text{PR}(T+ID+) / \text{PR}(T+ID-)$

By getting the predicted and real values or number of TP, TN, FP, FN return the Positive Likelihood Ratio of model

Value

PLR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.PLR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

EvaluationMeasures.PPV

EvaluationMeasures.PPV

Description

PPV of prediction

Usage

```
EvaluationMeasures.PPV(Real = NULL, Predicted = NULL, Positive = 1,  
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Positive Predictive Value is What fraction of positive predicted are real positive.

By getting the predicted and real values or number of TP,TN,FP,FN return the Precision or Positive Predicted Value of model

Value

PPV

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.PPV(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

 EvaluationMeasures.Precision

EvaluationMeasures.Precision

Description

Precision of prediction

Usage

```
EvaluationMeasures.Precision(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Precision is What fraction of positive predicted are real positive.

By getting the predicted and real values or number of TP,TN,FP,FN return the Precision or Positive Predicted Value of model

Value

Precision

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.Precision(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,0,0))
```

EvaluationMeasures.Recall

EvaluationMeasures.Recall

Description

Recall of prediction

Usage

```
EvaluationMeasures.Recall(Real = NULL, Predicted = NULL, Positive = 1,  
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Recall is Proportional of positives that are correctly identified

By getting the predicted and real values or number of TP,TN,FP,FN return the True Positive Rate or Sensitivity or Recall of model

Value

Recall

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.Recall(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

EvaluationMeasures.Sensitivity
EvaluationMeasures.Sensitivity

Description

Sensitivity of prediction

Usage

```
EvaluationMeasures.Sensitivity(Real = NULL, Predicted = NULL,
  Positive = 1, TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Sensitivity is Proportional of positives that are correctly identified

By getting the predicted and real values or number of TP,TN,FP,FN return the Sensitivity or Recall or True Positive Rate of model

Value

Sensitivity

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.Sensitivity(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

EvaluationMeasures.Specificity
EvaluationMeasures.Specificity

Description

Specificity of prediction

Usage

```
EvaluationMeasures.Specificity(Real = NULL, Predicted = NULL,
  Positive = 1, TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

Specificity is Proportional of negatives that are correctly identified

By getting the predicted and real values or number of TP,TN,FP,FN return the Specificity or True Negative Rate of model

Value

Specificity

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.Specificity(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

EvaluationMeasures.table

EvaluationMeasures.table

Description

Specify the number of TP,TN,FP,FN

Usage

EvaluationMeasures.table(Real, Predicted, Positive = 1)

Arguments

| | |
|-----------|--|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |

Details

By getting the predicted values and real values calculate the number of True positive samples, False Negative, False Positive and True Negative

Value

TP,TN,FP,FN

Author(s)

Babak Khorsand

Examples

EvaluationMeasures.table(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,0,0,0))

EvaluationMeasures.TNR

EvaluationMeasures.TNR

Description

TNR of prediction

Usage

EvaluationMeasures.TNR(Real = NULL, Predicted = NULL, Positive = 1,
TP = NULL, TN = NULL, FP = NULL, FN = NULL)

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

True Negative Rate is Proportional of negatives that are correctly identified

By getting the predicted and real values or number of TP,TN,FP,FN return the Specificity or True Negative Rate of model

Value

TNR

Author(s)

Babak Khorsand

Examples

```
EvaluationMeasures.TNR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```

EvaluationMeasures.TPR

EvaluationMeasures.TPR

Description

TPR of prediction

Usage

```
EvaluationMeasures.TPR(Real = NULL, Predicted = NULL, Positive = 1,
  TP = NULL, TN = NULL, FP = NULL, FN = NULL)
```

Arguments

| | |
|-----------|---|
| Real | Real binary values of the class |
| Predicted | Predicted binary values of the class |
| Positive | Consider 1 label as Positive Class unless changing this parameter to 0 |
| TP | Number of True Positives. Number of 1 in real which is 1 in predicted. |
| TN | Number of True Negatives. Number of 0 in real which is 0 in predicted. |
| FP | Number of False Positives. Number of 0 in real which is 1 in predicted. |
| FN | Number of False Negatives. Number of 1 in real which is 0 in predicted. |

Details

True Positive Rate is Proportional of positives that are correctly identified

By getting the predicted and real values or number of TP,TN,FP,FN return the True Positive Rate or Sensitivity or Recall of model

Value

TPR

Author(s)

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Examples

```
EvaluationMeasures.TPR(c(1,0,1,0,1,0,1,0),c(1,1,1,1,1,1,0,0))
```


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