Package ‘boottol’

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Type Package

Title Bootstrap Tolerance Levels for Credit Scoring Validation Statistics

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Description Used to create bootstrap tolerance levels for the Kolmogorov-Smirnov (KS) statistic, the area under receiver operator characteristic curve (AUROC) statistic, and the Gini coefficient for each score cutoff. Also provides a bootstrap alternative to the Vasicek test.

Depends R (>= 3.1.2), boot, plyr

License GPL-2

NeedsCompilation no

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boottol

*Bootstrap Percentile Confidence Intervals.*

**Description**

Creates 100(1-alpha) percent bootstrap percentile confidence intervals around the KS, AUROC, and Gini statistics.

**Usage**

```r
boottol(score, target, bootsamp, lltml, grp, alpha)
```

**Arguments**

- `score` - The score groupings.
- `target` - The binary target variable.
- `bootsamp` - How many bootstrap samples to be computed. When bootsamp is too low, a warning will be produced.
- `lltml` - If the score is rank ordered least likely to most likely then set equal to 1.
- `grp` - An integer value of how the scores are grouped.
- `alpha` - Confidence level.

**References**


**Examples**

```r
data("data")
## Not run: tol.Nlevel=boottol(score=data$Score,target=data$Target,
,bootsamp=2000,lltml=1,grp=10, alpha=0.99)
## End(Not run)
```

**data**

*Bootstrap Tolerance Levels for Credit Scoring Validation Statistics: Rank Order Statistics*

**Description**

This data was randomly generated. The Target variable is binary. The Score variable ranges from 0-90 in intervals of 10.
Usage

data(data)

Format

A data frame with 5000 observations on the following 3 variables.

Id  a numeric vector
Target a numeric vector
Score a numeric vector

Examples

data("data")

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**Description**

This data was randomly generated. The Response variable is a response target and is binary. The Segment variable ranges from 0-60 in intervals of 10.

Usage

data(vasdata)

Format

A data frame with 7000 observations on the following 2 variables.

segment a numeric vector
response a numeric vector

Examples

data("vasdata")
vastol *Bootstrap Alternative to Vasicek Test.*

**Description**

Creates 100(1-alpha) percent bootstrap percentile confidence intervals as an alternative to the Vasicek test.

**Usage**

`vastol(segment, target, bootsamp, grp, alpha, lower)`

**Arguments**

- `segment` - The score groupings.
- `target` - The binary target variable.
- `bootsamp` - How many bootstrap samples to be computed. When `bootsamp` is too low, a warning will be produced.
- `grp` - An integer value of how the segments are grouped.
- `alpha` - Confidence level.
- `lower` - Set equal to 1 if calculating a lower bound.

**References**


**Examples**

```r
data("vasdata")
vastol.level=vastol(segment=vasdata$segment,target=vasdata$response,bootsamp=500,grp=10,alpha=0.99,lower=1)
```
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