

Package ‘jgsbook’

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Type Package

Title Package of the German Book “Statistik mit R und RStudio” by
Joerg grosse Schlarmann

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Description All datasets and functions used in the german book “Statistik mit R und RStudio” by Joerg grosse Schlarmann.
You can read it online at <<https://www.prodnis.de/R/>> .

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R topics documented:

epa	2
freqTable	3
kenngroessen	3
KIbinomial_a	4
KIbinomial_u	4
KInormal_a	5
KInormal_u	6

mma	6
Nachtwachen	7
nw	8
OrdinalSample	8
pf8	9
Pflegeberufe	9
sens.spec	10
ztrans	10
Index	12

 epa

Datatable of the epa Example

Description

Datatable of the epa Example

Usage

`data(epa)`

Format

A data frame with 620 observations in 6 variables

Details

Variables in the dataset:

- `sex`. a factor with levels `m w d`, giving the proband's sex
- `age`. a numeric vector
- `cms`. a numeric vector
- `risk`. a dichotome vector, 0 = not at risk, 1 = at risk
- `expert`. a dichotome vector of expert's decision, 0 = not at risk, 1 = at risk
- `decu`. a dichotome vector, 0 = no decubitus, 1 = decubitus

Source

<https://www.produnis.de/R/>

freqTable	<i>create a frequency table</i>
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Description

returns a frequency table with absolute and relative frequencies and cumulated frequencies

Usage

```
freqTable(werte)
```

Arguments

werte factor with observed data

Value

dataframe table

Examples

```
x <- ceiling(stats::rnorm(20))
freqTable(x)
```

kenngroessen	<i>create a tibble with kenngroessen</i>
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Description

returns a tibble with all kenngroessen

Usage

```
kenngroessen(werte)
```

Arguments

werte numeric vector

Value

tibble with all kenngroessen

Examples

```
x <- ceiling(stats::rnorm(20))
kenngroessen(x)
```

KIbinomail_a	<i>compute confidence intervall for binomial proportions</i>
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Description

returns borders and length of confidence intervall for binomial proportions

Usage

```
KIbinomail_a(p, n, alpha)
```

Arguments

p	proportion obeserved
n	number of observations
alpha	error niveau

Value

confidence intervall

Examples

```
KIbinomail_a(0.35, 150, 0.05)
```

KIbinomial_u	<i>compute confidence intervall for difference of binomial proportions</i>
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Description

returns borders and length of confidence intervall for difference of binomial proportions

Usage

```
KIbinomial_u(p1, n1, p2, n2, alpha)
```

Arguments

p1	proportion obeserved in group 1
n1	number of observations in group 1
p2	proportion obeserved in group 2
n2	number of observations in group 2
alpha	error niveau

Value

confidence intervall

Examples

```
KIbinomial_u(0.25, 100, 0.4, 150, 0.05)
```

KInormal_a	<i>compute confidence intervall for mean of normal distributed data</i>
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Description

returns borders and length of confidence intervall for mean of normal distributed data

Usage

```
KInormal_a(xquer, s, n, alpha)
```

Arguments

xquer	mean of obeserved data
s	standard deviation of observed data
n	number of observations
alpha	error niveau

Value

confidence intervall

Examples

```
KInormal_a(400, 20, 100, 0.05)
```

KInormal_u *compute confidence intervall for mean of normal distributed data*

Description

returns borders and length of confidence intervall for mean of normal distributed data

Usage

```
KInormal_u(x1, s1, n1, x2, s2, n2, alpha)
```

Arguments

x1	mean of obeserved data in group 1
s1	standard deviation of observed data in group 1
n1	number of observations in group 1
x2	mean of obeserved data in group 2
s2	standard deviation of observed data in group 2
n2	number of observations in group 2
alpha	error niveau

Value

confidence intervall

Examples

```
KInormal_u(2.22, 0.255, 13, 2.7, 0.306, 10 , 0.05)
```

mma *Dataset of a work sampling study*

Description

Dataset of a work sampling study

Usage

```
data(mma)
```

Format

A data frame with 9768 observations in 6 variables.

Details

Variables in the dataset:

- day. a vector, giving the number of the observation day
- time. a factor giving the time of observation
- ward. a factor giving the ward under observation
- qual. a factor giving the qualification of the nurse
- category. a factor of qualification categories
- action. a factor giving the observed action

Source

<https://www.produnis.de/R/>

Nachtwachen

Dataset of the German Nachtwachen study

Description

Dataset of the German Nachtwachen study

Usage

`data(Nachtwachen)`

Format

A data frame with 276 observations in 37 variables.

Source

<https://www.produnis.de/R/>

nw

Dataset of the German Nachtwachen study with labelled variables

Description

Dataset of the German Nachtwachen study, labelled version

Usage

```
data(nw)
```

Format

A data frame with 276 observations in 37 variables.

Source

<https://www.produnis.de/R/>

OrdinalSample

Datatable of an Ordinal Sample

Description

Datatable of an Ordinal Sample

Usage

```
data(OrdinalSample)
```

Format

A data frame with 415 observations in 4 variables.

Details

Variables in the dataset:

- *Konflikt*. a numeric vector giving the potential of conflicts.
- *Zufriedenh*. a numeric vector giving the satisfaction of workers
- *Geschlecht*. a factor of proband's sex, 1 = male, 2=female
- *Stimmung*. an ordinal factor of proband's mood

Source

<https://www.produnis.de/R/>

pf8

Dataset of the PF8 example.

Description

This is the dataset of the PF8 example.

Usage

```
data(pf8)
```

Format

A data frame with 731 observations in 16 variables.

Source

<https://www.produnis.de/R/>

Pflegeberufe

Matrix of Pflegeberufe by Isfort et al. 2018

Description

Matrix of Pflegeberufe by Isfort et al. 2018

Usage

```
data(Pflegeberufe)
```

Format

A matrix with 9 cols (years) and 5 rows (nursing profession).

Author(s)

Isfort et al. 2018 (Pflegethermometer)

Source

<https://www.produnis.de/R/>

`sens.spec` *compute sensitivity and specificity*

Description

returns sensitivity specificity, negativ-predictive-value, positiv-predictive-value

Usage

```
sens.spec(rp, rn, fp, fn)
```

Arguments

<code>rp</code>	number of true-positive (richtig-positiv)
<code>rn</code>	number of true-negative (richtig-negativ)
<code>fp</code>	number of false-positive (falsch-positiv)
<code>fn</code>	number of false-negative (falsch-negativ)

Value

a data.frame with `sens`, `spec`, `ppw`, `npw`

Examples

```
sens.spec(40, 17, 85, 4)
```

`ztrans` *z-Transformation by given numbers, with $z = (x - \mu) / sd$*

Description

z-Transformation by given numbers, with $z = (x - \mu) / sd$

Usage

```
ztrans(x, mu = 0, sd = 1)
```

Arguments

<code>x</code>	a value to transform
<code>mu</code>	the given mu
<code>sd</code>	the given standard deviation

Value

the z-transformed value

Examples

```
ztrans(120,mu=118,sd=20)
```

Index

* datasets

- epa, [2](#)
- mma, [6](#)
- Nachtwachen, [7](#)
- nw, [8](#)
- OrdinalSample, [8](#)
- pf8, [9](#)
- Pflegeberufe, [9](#)

epa, [2](#)

freqTable, [3](#)

kenngroessen, [3](#)

KIbinomail_a, [4](#)

KIbinomial_u, [4](#)

KInormal_a, [5](#)

KInormal_u, [6](#)

mma, [6](#)

Nachtwachen, [7](#)

nw, [8](#)

nw_labelled (nw), [8](#)

OrdinalSample, [8](#)

ordinalSample (OrdinalSample), [8](#)

pf8, [9](#)

Pflegeberufe, [9](#)

sens.spec, [10](#)

ztrans, [10](#)