Package 'scidesignR'

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Type Package

Title Data Sets from Design and Analysis of Experiments and Observational Studies using R

Version 1.0.0

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Depends R (>= 3.5.0)

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Contents

`agedata` *agedata*

Description

A data frame of peoples' age

- `age` - age in years

Usage

```
agedata
```

Format

R data frame

`BR_LatSq` *BR_LatSq*

Description

`BR_LatSq` contains data from Table 3 of Bliss, C.I. and Rose, C.L. (1940).

- `Dogs` - Dog number
- `Weeks` - Week number
- `Treat` - Treatment
- `value` - Mg-per cent serum calcium

Usage

```
BR_LatSq
```

Format

R data frame.

chemplant *chemplant*

Description

chemplant contains data from section 5.2 of Box et al. (2005)

- run - run number
- T - Level of temperature
- C - Level of concentration
- K - Level of catalyst
- y - Yield

Usage

```
chemplant
```

Format

R data frame.

cookies *cookies*

Description

chemplant contains data from section 5.2 of Box et al. (2005)

- Run - run number
- Butter - Level of butter
- Sugar - Level of sugar
- Powder - Level of baking powder
- Taste - Taste on a scale of 1 to 10

Usage

```
cookies
```

Format

R data frame.

`covid19_trial` *covid19_trial*

Description

`covid19_trial` is simulated data based on Evaluating the efficacy of hydroxychloroquine and azithromycin to prevent hospitalization or death in persons with covid-19

- `patient` - Patient ID
- `trt` - Treatment indicator
- `die_hosp` - Died in hospital (1 = yes, 0 = no)
- `age` - Age of patient (years)

Usage

```
covid19_trial
```

Format

R data frame.

`CSectdat` *CSectdat*

Description

`CSectdat` is data from Obstetrics and Gynaecology, University of Toronto

- `Hospital` - `MG` or `NYG`
- `CSecthosp` - Indicator of C-section (1 = yes, 0 = no)

Usage

```
CSectdat
```

Format

R data frame.

fertdat *fertdat*

Description

fertdat is data on the effect of two treatments on wheat yield

- trt - Level of fertilizer (A or B)
- fert - wheat yield

Usage

```
fertdat
```

Format

R data frame.

hsvdat *hsvdat*

Description

hsvdat is data from Jaynes et al. (2013). Application of fractional factorial designs to study drug combinations

The columns are:

Run - Run number

A, B, C, D, E, F - Indicator of drug level (-1 = low, +1 = high)

readout - percentage of cells positive for HSV-1 after therapy

Usage

```
hsvdat
```

Format

R data frame.

leafspring *leafspring*

Description

`leafspring` is data from Section 5.1 of Wu and Hammada (2011)

The columns are:

`B`, `C`, `D`, `E`, `Q` - Indicator of factor level (-1 = low, +1 = high)

`y1`, `y2`, `y3` - three replications of free height measurement

Usage

```
leafspring
```

Format

R data frame.

lifesat_childmort *lifesat_childmort*

Description

`lifesat_childmort` data from World Happiness Report 2019

The columns are:

`Country` - Country
`Country Code` - Country code

`Year` - Year

`Tot_pop` - Total population

`Continent` - Continent

`LifeSatisfaction` - Life satisfaction from Cantril Ladder (10 is the best and 0 is the worst)

`Under5mort` - Under 5 mortality per 1000

Usage

```
lifesat_childmort
```

Format

R data frame.

nhefs9282 *nhefs9282*

Description

nhefs9282 is data from the 1982 and 1992 waves of the NHANES I Epidemiologic Follow-up Study (NHEFS) column names that end in 1982 are from the 1982 survey and column names that end in 1992 are from the 1992 survey.

The columns are:

- HANESEQ - Subject ID
- wt1982 - 1982 weight (lb)
- wt1992 - 1992 weight (lb)
- smoke1982 - Did subject smoke in 1982 (1 = Yes, 2 = No)
- smoke1992 - Did subject smoke in 1992 (1 = Yes, 2 = No)
- sex - Sex (1 = Male, 2 = Female)
- genhealth1982 - General health (1 = Excellent, 2 = Very Good, 3 = Good, 4 = Fair, 5 = Poor)
- hyperhb1982 - Told by a doctor that you had hypertension or high blood pressure? (1 = Yes, 2 = No)
- cancer1982 - Did a doctor ever tell you that you had any cancer? (1 = Yes, 2 = No)
- cough1982 - Do you usually have a cough? Exclude clearing your throat. (1 = Yes, 2 = No)
- bedridden1982 - Are you usually confined to bed for moat of the day? (1 = Yes, 2 = No)
- asthma1982 - Did a doctor ever tell you that you had asthma? (1 = Yes, 2 = No)
- bronchemphy1982 - Did a doctor ever tell you that you had chronic bronchitis, emphysema? (1 = Yes, 2 = No)
- migraine1982 - Did a doctor ever tell you that you had migraine? (1 = Yes, 2 = No)
- heartcond1982 - Did a doctor ever tell you that you had heart condition or heart trouble? (1 = Yes, 2 = No)
- heartattack1982 - Did a doctor ever tell you that you had heart condition or heart attack? (1 = Yes, 2 = No)
- depressed1982 - During the past week I felt depressed? (1 = Yes, 2 = No)
- numcig1982 - About how many cigarettes a day do you smoke? (0 means less than one a day, 1 - 100 is number of cigarettes)
- amntalc1982 - On the average, how often do you drink alcoholic beverages, that is, beer, wine or liquor? (1-31 = Number of days, 94 = recently quit drinking, 95 = more than 3 but less than 12 times a year, no more than 3 times a year)
- drinkcoff1982 - Do you drink coffee? (1 = Yes, 2 = No)
- physicalactive1982 - In your usual day, aside from recreation, are you physically very active, moderately active, or quite inactive? (1 = very active, 2 = moderately active, 3 = quite inactive)

- marital1982 - Are you now married, widowed, divorced, separated or have you never been married? (1 = Married, 2 = Windowed, 3 = Divorced, 4 = Separated, 5 = Never Married)
- urbanrural1982 - Would you say that you have lived most of your life in a rural area, in the city, or in the city suburbs? (1 = rural, 2 = city, 3 = city suburbs, 4 = other (small town))
- famincome1982 - Which of these income groups represents your total combined family income for the past 12 months? (1 = < $3000, 2 = $3000 - $3999, 3 = $4000 - $4999, 4 = $5000 - $5999, 5 = $6000 - $6999, 6 = $7000 - $9999, 7 = $10000 - $14999, 8 = $15000 - $19999, 9 = $20000 - $24999, 10 = $25000 - $34999, 11 = $35000 - $49999, 12 = $50000 - $74999, 13 = $75000 - $100000) , 14 = over $100000)
- age1992 - Age in years
- age1982 - Age in years
- marital1992 - Current marital status (1 = married, 2 = widowed, 3 = divorced, 4 = separated, 5 = never married)
- deathage1992 - Subject age at death
- height1982 - Height (in)
- weight1982 - Weight (lb)
- weight1992 - Weight (lb)
- wtgain - Weight gain (lb) weight in 1992 minus weight in 1982
- qsmoke - 1982 smokers that quit smoking between 1982 and 1992 (1 = yes, 2 = no)
- incomeclass - Income classification based on 1982 family income (1 = famincome1982 >= 1 & famincome1982 <= 6, 2 = famincome1982 >= 7 & famincome1982 <= 8, 3 = famincome1982 >= 9 & famincome1982 <= 10, 4 = famincome1982 >= 11 & famincome1982 <= 12, 5 = famincome1982 >= 13)

Usage

```
nhefs9282
```

Format

R data frame.

`painstudy` *painstudy*

Description

Simulated data of Amundson, A.W. et al. (2017).

- pain - pain score (0 - no pain to 10 - worst possible pain)
- trt - treatment level

Usage

```
painstudy
```

Format

R data frame

`painstudy2` *painstudy2*

Description

Simulated data of Amundson, A.W. et al. (2017).

- `pain` - pain score (0 - no pain to 10 - worst possible pain)
- `trt` - treatment level

Usage

```
painstudy2
```

Format

R data frame

`rtdat` *rtdat*

Description

Reaction time data

- `rt` - reaction time (seconds)
- `group` - treatment level

Usage

```
rtdat
```

Format

R data frame

scidesignR_example *Get path to scidesignR example*

Description

scidesignR comes bundled with a few data sets in its `inst/extdata` directory. This function make them easy to access

Usage

```
scidesignR_example(file = NULL)
```

Arguments

`file`	Name of file. If `NULL`, the example files will be listed.

Examples

```
scidesignR_example()
scidesignR_example("nhefshwdat.csv")
```

shoedat_obs *shoedat_obs*

Description

Boys shoe data based on Section 3.2 of Box et al. (2005)

- `boy` - Subject id
- `sideA` - Side material A was assigned (L - left side, R - right side)
- `sideB` - Side material B was assigned (L - left side, R - right side)
- `wearA` - Amount of wear from the shoe assigned material A
- `wearB` - Amount of wear from the shoe assigned material B

Usage

```
shoedat_obs
```

Format

R data frame

silkdat *silkdat*

Description

Data from Bucciarelli, A. et a;. (2021)

- `Std` - Standard run number
- `Run` - Randomized run number
- `A:Number of baths` - Level of number of baths
- `B:Time` - Level of time
- `C:Temperature` - Level of temperature
- `D:Concentration` - Level of concentration
- `mass_change` - Mass change (initial mass - final mass)
- `mass_change_pct` - Mass percent change (initial mass - final mass)/(initial mass)
- `removed_sericin_single` - Amount of removed sericin from a single bath
- `removed_sericin_double` - Amount of removed sericin from a double bath
- `removed_sericin_pct` - Percentage of removed sericin

Usage

```
silkdat
```

Format

R data frame

wtlossdat *wtlossdat*

Description

`wtlossdat` contains data from section 5.2 of Box et al. (2005)

- `A` - Level of food diary
- `B` - Level of increasing activity
- `C` - Level of home visit
- `y` - Weight loss (kg)

Usage

```
wtlossdat
```

Format

R data frame.

Index