Package 'vannstats'

March 20, 2026

Title Simplified Statistical Procedures for Social Sciences

Version 1.6.3.20

Description Simplifies functions to conduct univariate, bivariate, and multivariate statistical techniques. Includes functions designed to replicate plots and tables that would result from similar calls in 'SPSS', including hst(), box(), qq(), tab(), cormat(), and residplot(). Also includes simplified formulae, such as mode(), scatter(), p.corr(), ow.anova(), and rm.anova().

Depends R (>= 3.2.3)

Encoding UTF-8

Imports gdata, plm, dplyr, ggplot2, rlang, purrr, stats, graphics, formula.tools, gplots, rstatix, stringr, ggrepel, ggpubr, DescTools, reshape2

License GPL-3

LazyData true

NeedsCompilation no

RoxygenNote 7.3.3

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Repository CRAN

Date/Publication 2026-03-20 01:00:02 UTC

Contents

`bar.chart` *Simplified Bar Chart*

Description

This function plots a bar chart (bar.chart) on a given data frame.

Usage

```
bar.chart(df, var1, lab = FALSE)
```

Arguments

`df`	data frame to read in.
`var1`	the dependent/outcome variable, Y. The variable of interest that should be plotted.
`lab`	logical (default set to `FALSE`). When set to `lab = TRUE`, will add frequency label for each bar in chart.

Value

This function returns the bar chart for `var1` in data frame `df`.

Examples

```
data <- mtcars

bar.chart(data,cyl)
```

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box *Simplified Boxplot*

Description

This function plots a Box-and-Whisker (box) on a given data frame, and uses simplified calls within the function to parse the boxplot by up to 2 variables.

Usage

```
box(df, var1, by1, by2)
```

Arguments

`df`	data frame to read in.
`var1`	the dependent/outcome variable, Y. The variable of interest that should be plotted.
`by1`	the main independent/predictor variable, X_1. A grouping variable by which the boxplot for `var1` should be parsed.
`by2`	a potential second independent/predictor variable, X_2. A second grouping variable by which the boxplot for `var1` (already parsed by `by1`) should be parsed.

Examples

```
data <- mtcars

box(data,mpg,cyl)
```

`chi.sq` *Simplified Chi Square*

Description

This function simplifies the call for Pearson's Chi Square test (chi.sq) on a given data frame.

Usage

```
chi.sq(
  df,
  var1,
  var2,
  correct = FALSE,
  post = FALSE,
  plot = FALSE,
  cramer = FALSE
)
```

Arguments

`df`	data frame to read in.
`var1`	the dependent/outcome variable, Y.
`var2`	the main independent/predictor variable, X.
`correct`	logical (default set to `F`). When set to `correct = T`, will employ Yates' continuity correction (for data that violate the normality assumption).
`post`	logical (default set to `F`). When set to `post = T`, will return results of post-hoc (Z) tests of the standardized residual for each cell (the standardized difference between observed and expected frequencies), using Bonferroni's alpha adjustment, and returns an adjusted p-value for each cell/comparison.
`plot`	logical (default set to `F`). When set to `plot = T`, will print a corrplot-style plot for showing both the value of difference between the standardized residual (Z) and the related level of significance of this difference (for each cell comparison) as well as a gradient color representing the relative value of this residual. Will also return results of post-hoc (Z) tests of the standardized residual for each cell (the standardized difference between observed and expected frequencies), using Bonferroni's alpha adjustment, and returns an adjusted p-value for each cell/comparison.
`cramer`	logical (default set to `F`). When set to `post = T`, will return results of Cramer's V, a measure of the strength of the association between the two variables.

Value

This function returns the summary results table for a Pearson's Chi Square test, examining the relationship between `var1` from data frame `df`, and `var2`.

Examples

```
data <- mtcars

x2 <- chi.sq(data,vs,am)
summary(x2)
```

---

chiplot *Chi Square Plot*

Description

This function plots a cell-by-cell chart (chiplot) on a given matrix of standardized residuals (Z) from a chi square test.

Usage

```
chiplot(
  zmat,
  method = "square",
  type = "full",
  ggtheme = ggplot2::theme_classic(),
  title = "",
  show.legend = TRUE,
  legend.title = "Z",
  colors = c("dodgerblue3", "white", "firebrick2"),
  outline.color = "white",
  lab = FALSE,
  lab_col = "black",
  lab_size = 4,
  p.mat = NULL,
  z.crit = NULL,
  sig.level = 0.05,
  insig = pch,
  pch = 4,
  pch.col = "black",
  pch.cex = 5,
  tl.cex = 12,
  tl.col = "black",
  tl.srt = 45,
  digits = 2,
  as.is = FALSE
)
```

Arguments

zmat	a matrix of standardized residuals, extracted from the chi square test, to visualize.
method	the type of visualization used in plot (default set to "square").
type	the section of the plot that will be displayed (default set to "full").
ggtheme	ggplot2 function to set the theme of the plot (default set to ggplot2::theme_classic()).
title	title of the plot, extracted from the chi square test.
show.legend	logical (default set to TRUE), to display legend on plot.
legend.title	title of the legend (default set to "Z").
colors	a vector of 3 colors for negative, zero, and positive residuals.
outline.color	the outline color of the square (default set to "white").
lab	logical (default set to FALSE, but set to TRUE if extracted from chi square test), to display standardized residual (Z) value (and significance stars) on for each cell comparison on the plot.
lab_col	color of text displayed in each cell comparison for standardized residual (Z) value when lab = TRUE (default set to "black").
lab_size	size of text displayed in each cell comparison for standardized residual (Z) value when lab = TRUE (default set to 4).
p.mat	a matrix of p-values for each standardized residual (Z) value comparison, extracted from chi square test.
z.crit	the critical Z value for the comparison of standardized residuals (Z), extracted from the chi square test.
sig.level	the alpha value used to assess significance (default set to 0.05).
insig	glyphs to add on non-significant standardized residual (Z) values (default set to "pch").
pch	glyphs added to non-significant standardized residual (Z) values (default set to 4).
pch.col	color of pch glyphs (default set to "black").
pch.cex	size of pch glyphs (default set to 5).
tl.cex	size of text label for each category name for both variables (default set to 12).
tl.col	color of text label for each category name for both variables (default set to "black").
tl.srt	string rotation of text label for each category name for the variable on the x-axis (default set to 45).
digits	the number of decimal digits to be displayed in the plot (default set to 2, but set to 3 if extracted from chi square test).
as.is	determines how to handle dimnames, either left as strings (if set to TRUE), or converted (default set to FALSE).

Value

This function returns the chi square plot of standardized residuals for categories of var1 by var2 in data frame df, all of which are extracted from the chi square test.

Examples

```
data <- mtcars

x2 <- chi.sq(data,vs,am,post=TRUE)

chiplot(zmat = x2$z_mat,p.mat = x2$p_z_mat,z.crit = round(x2$z_crit, 4),
outline.color = "white",lab = TRUE,digits = 3)
```

`ci.calc` *Simplified Confidence Interval Calculation*

Description

This function calculates the confidence interval (for a given confidence level) for a variable in a given data frame.

Usage

```
ci.calc(df, var1, cl)
```

Arguments

`df`	data frame to read in.
`var1`	the variable of interest for which the CI will be calculated.
`cl`	the desired confidence level (in percentages, ranging from 1 to 100).

Value

This function returns the mean, lower bound, upper bound, and standard error.

Examples

```
data <- mtcars

ci.calc(data,mpg,95)
```

cormat *Simplified Correlation Matrix*

Description

This function creates a correlation (cormat) on a data frame of the variables in an equation.

Usage

```
cormat(df, formula)
```

Arguments

df	data frame to read in.
formula	the variables in the regression model, $Y = X_1 + X_2 + ... + X_m$, written as Y ~ X1 + X2...

Value

This function returns a correlation matrix for the variables provided in the formula.

Examples

```
data <- mtcars

cormat(data, mpg ~ wt + am)
```

Defendants2025 *Defendants, 2025 (Individual-Level)*

Description

This is a simulated data set, created in 2025. These data represent cases for individual defendants held at the Richard J. Donovan Correctional Facility in San Diego, CA. These data were simulated by Dr. Burrel Vann Jr, and represent a random sample of individuals held in the Center in 2025. Each observation in the data set represents a unique individual defendant, and the unique characteristics tied to their court case.

Usage

```
Defendants2025
```

Format

A data frame with 1738 observations and 11 variables.

id	Unique defendant identifier
age	The defendant's age
race	Race of the defendant
race_binary	race, broken into a binary/dummy variable, measuring whether or not the defendant is white
charge	The crime the defendant was charged with
gang	Whether or not the defendant is affiliated with a gang
priors	The number of prior misdemeanors the defendant has
gun	Whether or not a gun was involved in this case
risk_score	A judge's risk-of-reoffending score for the defendant
bail	The bail amount for the defendant
perkins	Whether or not a Perkins Operation was conducted on defendant while in custody

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`dummy` *Creating Dummy-Code Columns for Values of a Variable*

Description

This function applies dummy-coding to a variable of interest, enabling the creation of *n* or *n-1* columns/variables based on *n* number of attributes for the variable.

Usage

```
dummy(df, var, remove = FALSE)
```

Arguments

`df`	data frame to read in.
`var`	the variable to be dummy-coded. Is automatically converted to a character string.
`remove`	logical (default set to `F`). When set to `remove = T`, will return a data frame using the true number of dummy coded columns (e.g. *n-1*).

Value

This function updates the data frame with new variables (columns) representing unique values of a selected variable, and a binary score (0/1) for the absence or presence of a column's represented value for each observation.

Examples

```
data <- howell_aids_long

dummy(data, student)
```

GSS2014 *General Social Survey, 2014*

Description

This subset of data comes from one iteration of the *General Social Survey*, administered in 2014. These data were collected by the National Opinion Research Center (NORC) at the University of Chicago. The observations represent individuals' responses to survey questions. Information about the data set can be found in the GSS Codebook at: https://burrelvannjr.com/docs/GSS_Codebook.pdf.

Usage

```
GSS2014
```

Format

A data frame with 2538 observations and 676 variables.

id	respondent id number
age	age of respondent
sex	respondents sex (1 = Male, 2 = Female)
race	race of respondent
educ	highest year of school completed
dipged	diploma, ged, or other
paeduc	highest year school completed, father
maeduc	highest year school completed, mother
speduc	highest year school completed, spouse
sei10	r's socioeconomic index (2010)
conrinc	respondent income in constant dollars
coninc	family income in constant dollars
degree	rs highest degree
padeg	fathers highest degree
madeg	mothers highest degree
spdeg	spouses highest degree
citizen	are you a citizen of america?
born	was r born in this country
year	gss year for this respondent
cohort	year of birth
spsei10	r's spouse's socioeconomic index (2010)
pasei10	r's father's socioeconomic index (2010)
masei10	r's mother's socioeconomic index (2010)
childs	number of children
immcrime	immigrants increase crime rates
abany	abortion if woman wants for any reason
abdefect	strong chance of serious defect

abhlth	womans health seriously endangered
abnomore	married–wants no more children
abpoor	low income–cant afford more children
abrape	pregnant as result of rape
absingle	not married
accptoth	r accept others even when they do things wrong
acqntsex	r had sex with acquaintance last year
actassoc	how important to be active on soc or pol association
actlaw	how likely r to do something if unjust law being cons
adults	household members 18 yrs and older
advfront	sci rsch is necessary and should be supported by federal govt
affctlaw	how lliely congress give serious attention to rs dema
affrmact	favor preference in hiring blacks
aged	should aged live with their children
aidscndm	condom can reduce aids
aidslook	a health-look person may have aids
amancstr	how important to have american ancestry
ambetter	agree america is a better country
ambornin	how important to have been born in america
amchrstn	how important to be a christian
amcit	how important to have american citizenship
amcitizn	agree i would rather be a citizen of america
amcult	it is impossible to become fully american
amenglsh	how important to be able to speak english
amfeel	how important to feel american
amgovt	how important to respect america's laws etc
amlived	how important to have lived in america for life
amownway	america should follow its own interests
amproud1	how proud being american
amshamed	agree there are things make me ashamed
amsports	agree sports makes me proud to be an american
amtv	tv should give preference to american films
arthrtis	told have arthritis or rheumatism
astrolgy	ever read a horscope or persoanl astrology report
astrosci	astrology is scientific
attend	how often r attends religious services
attrally	attended a political meeting or rally
avoidbuy	boycotted products for pol reasons
babies	household members less than 6 yrs old
backpain	r had back pain in the past 12 months
balneg	sci research is strongly in favor of harmful results
balpos	sci research is strongly in favor of benefits
befair	how often do you think people take advantage
belikeus	agree better if people were more like americans
bettrlfe	science makes our lives better
betrlang	which language r speaks more fluent
bible	feelings about the bible
bigbang	sci knowledge:the universe began with a huge explosion

boyorgrl	sci knowledge:father gene decides sex of baby
buypol	how important to choose products for pol reasons
buyvalue	percent of company stock r bought from own money
cantrust	poeple can be trusted or cant be too careful
cappun	favor or oppose death penalty for murder
careself	those in need have to take care of themselves
carried	r carried a stranger's belongings
chldidel	ideal number of children
chngeoth	how often r try to persuade other to share views
chngtme	how often r allowed change schedule
choices	political parties dont give real policy choices
citworld	i am a citizen of the world
class	subjective class identification
closeblk	how close feel to blacks
closewht	how close feel to whites
clsenoam	how close do you feel to north america
clsestat	how close do you feel to your state
clsetown	how close do you feel to your town or city
clseusa	how close do you feel to america
cntctgov	contacted politician or civil servant to express view
colath	allow anti-religionist to teach
colcom	should communist teacher be fired
coldeg1	the highest degree r have earned
colhomo	allow homosexual to teach
colmil	allow militarist to teach
colmslm	allow anti-american muslim clergymen teaching in college
colrac	allow racist to teach
colsci	r has taken any college-level sci course
colscinm	number of college-level sci courses r have taken
compperf	size of perf based pay depend on profits
comprend	rs understanding of questions
compuse	r use computer
conarmy	confidence in military
conbus	confidence in major companies
conclerg	confidence in organized religion
condemnd	r free from conflicting demands
condom	used condom last time
condrift	sci knowledge:the continents have been moving
coneduc	confidence in education
confed	confid. in exec branch of fed govt
confinan	confid in banks & financial institutions
conjudge	confid. in united states supreme court
conlabor	confidence in organized labor
conlegis	confidence in congress
conmedic	confidence in medicine
conpress	confidence in press
consci	confidence in scientific community
contv	confidence in television

corruptn	how widespread corruption is in pub service in americ
courts	courts dealing with criminals
cowrkhlp	coworkers can be relied on when r needs help
cowrkint	coworkers take a personal interest in r
crack30	r last use crack cocaine
crimlose	people convicted of serious crimes lose citizen rights
cutahead	r allowed a stranger to go ahead of you in line
decsorgs	america should follow decision of intl org
defpensn	r has defined benefit pension plan
dem10fut	how well will democracy work in america in ten yrs
dem10pst	how well did democracy work in america ten yrs ago
demtoday	how well democracy work in america
denom	specific denomination
denom16	denomination in which r was raised
depress	told have depression
diabetes	told have diabetes
directns	r has given directions to a stranger
discaff	whites hurt by aff. action
discaffm	a man won't get a job or promotion
discaffw	a woman won't get a job or promotion
discpol	how often r discuss politics
divlaw	divorce laws
divorce	ever been divorced or separated
dwelown	does r own or rent home?
earnrs	how many in family earned money
earthsun	sci knowledge:the earth goes around the sun
effctsup	supervisor effective solve work/personal conflicts
elecfair	how fair last natl election:opprtunities of candidate
electron	sci knowledge:electrons are smaller than atoms
elecvote	how honest last natl election:counting of votes
emailhr	email hours per week
emailmin	email minutes per week
empinput	r involved in any task force for decision-making
emptrain	received formal training from employer
eqwlth	should govt reduce income differences
esop	r is member of esop
ethnic	country of family origin
evcrack	r ever use crack cocaine
evidu	r ever inject drugs
evolved	sci knowledge:human beings developed from animals
evpaidsx	ever have sex paid for or being paid since 18
evstray	have sex other than spouse while married
evwork	ever work as long as one year
excldimm	america should exclude illegal immigrants
expdesgn	better way to test drug btw control and non-control
exptext	why is it better to test drug this way
extrapay	eligible for performance based pay
extrayr	year of the most recent perf based payments

fair	people fair or try to take advantage
fairearn	how fair is what r earn on the job
famgen	number of family generations in household
family16	living with parents when 16 yrs old
famvswk	how often fam life interfere job
famwkoff	how hard to take time off
fear	afraid to walk at night in neighborhood
fechld	mother working doesnt hurt children
feelevel	amount of fees paid
feeused	fee given to get case
fefam	better for man to work, woman tend home
fehire	should hire and promote women
fejobaff	for or against preferential hiring of women
fepol	women not suited for politics
fepresch	preschool kids suffer if mother works
finalter	change in financial situation
finrela	opinion of family income
forland	foreigners should not be allowed to buy land
form	form of split questionnaire asked
freetrde	free trade leads to better products
fringeok	fringe benefits are good
frndsex	r had sex with friend last year
fucitzn	is r planning/appling for us citizenship or not
fund	how fundamentalist is r currently
fund16	how fundamentalist was r at age 16
getahead	opinion of how people get ahead
givblood	r donated blood during the past 12 months
givchrty	r has given money to a charity
givhmlss	r has given food or money to a homeless person
givseat	r offered seat to a stranger during past 12 months
god	rs confidence in the existence of god
goodlife	standard of living of r will improve
govdook	we can trust people in govt
granborn	how many grandparents born outside u.s.
grass	should marijuana be made legal
grpother	r belongs to another voluntary association
grpparty	r belongs to a political party
grprelig	r belongs to a church or othr religious organization
grpsprts	r belongs to a sports, leisure, or cultural grp
grpwork	r belongs to a trade union or professtional associati
gunlaw	favor or oppose gun permits
gvtrghts	(on a scale of 1 to 7, where 1 is not at all important and 7 is very important
handmove	r perform forceful hand movements
hapcohab	happiness of relt with partner
hapmar	happiness of marriage
happy	general happiness
haveinfo	enough info to get the job done
health	condition of health

health1	rs health in general
hefinfo	number of hef informant
height	r is how tall
helpaway	r looked after plant or pet of others while away
helpblk	should govt aid blacks?
helpful	people helpful or looking out for selves
helphwrk	helped someone with hwork during past 12 months
helpjob	helped somebody to find a job past 12 months
helpnot	should govt do more or less?
helpoth	to help others
helppoor	should govt improve standard of living?
helpsick	should govt help pay for medical care?
helpusa	how important to help worse off ppl in america
helpwrld	how important to help worse off ppl in rest of world
hhtype	household type
hhtype1	household type (condensed)
hispanic	hispanic specified
hivkiss	kiss can spread hiv
hivtest	have you ever been tested for hiv
hivtest1	in what month and year was your last hiv test
hivtest2	where did you have your last hiv test
hivvac	there is a vaccine that can prevent hiv
hlpequip	enough help and equip to ge the job done
hlthall	healthcare provided for everyone
hlthdays	days of activity limitation past 30 days
homosex	homosexual sex relations
hompop	number of persons in household
hotcore	sci knowledge: the center of earth is very hot
hrs1	number of hours worked last week
hrs2	number of hours usually work a week
hrsrelax	hours per day r have to relax
hsbio	r ever took a high school biology course
hschem	r ever took a high school chemistry course
hsmath	the highest level of math r completed in high school
hsphys	r ever took a high school physics course
hunt	does r or spouse hunt
hurtatwk	number of injuries on the job past 12 months
hvylift	r do repeated lifting
hyperten	told have hypertension or high blood pressure
idu30	r inject drugs in past 30 days
if08who	who you would have voted for
if12who	who would r have voted for in 2012 election
ifwrong	agree people should support their country
immameco	immigrants good for america
immassim	what statement about immigrants matches view
immcult	immigrants undermine american culture
immeduc	legal immigrants should have same education as americans
immideas	immigrants make america more open

immjobs	immigrants take jobs away
immrghts	legal immigrants should have same right as american
imports	america should limit the import
incom16	rs family income when 16 yrs old
income	total family income
income06	total family income
indperf	size of perf based pay depend on individual
intecon	interested in economic issues
inteduc	interested in local school issues
intenvir	interested in environmental issues
interpol	joined an internet political forum
intfarm	interested in farm issues
intintl	interested in international issues
intlblks	unintelligent - intelligent
intlincs	largee intl company damage to local business
intlwhts	unintelligent -intelligent
intmed	interested in medical discoveries
intmil	interested in military policy
intrhome	internet access in r's home
intsci	interested in new scientific discoveries
intspace	interested in space exploration
inttech	interested in technologies
jobfind	could r find equally good job
jobfind1	how easy for r to find a same job
jobhour	short working hours
jobinc	high income
joblose	is r likely to lose job
jobmeans	work important and feel accomplishment
jobpromo	chances for advancement
jobsec	no danger of being fired
jobsecok	the job security is good
joindem	took part in a demonstration
kidssol	rs kids living standard compared to r
knowschd	how far in advance know work schedule
knowwhat	r knows what's expected on job
laidoff	r was laid off main job last year
lasers	sci knowledge:lasers work by focusing sound waves
learnnew	job requires r to learn new things
leftrght	how left or right in politics
lentto	lent money to another person past 12 months
lessprd	agree often less proud of america
letdie1	allow incurable patients to die
letin1	number of immigrants to america nowadays should be
letin1a	number of immigrants nowadays should be
libath	allow anti-religious book in library
libcom	allow communists book in library
libhomo	allow homosexuals book in library
libmil	allow militarists book in library

libmslm	allow anti-american muslim clergymen's books in library
librac	allow racists book in library
life	is life exciting or dull
liveblks	neighborhood half black
livewhts	r favors living in half white neighborhood
loanitem	r has let someone borrow a item of some value
localnum	number of employees: rs work site
maind10	mothers industry code (naics 2007)
major1	college major 1
major2	college major 2
majorcol	the field of degree r earned
manvsemp	relations bw management and employees
maocc10	mothers census occupation code (2010)
marasian	close relative marry asian
marblk	close relative marry black
marhisp	close relative marry hispanic
marhomo	homosexuals should have right to marry
marital	marital status
martype	marital type
marwht	r favor close relative marrying white person
matesex	was 1 of rs partners spouse or regular
mawrkgrw	mothers employment when r was 16
mawrkslf	mother self-emp. or worked for somebody
meltpot1	better to maintain distinct cultures
meovrwrk	men hurt family when focus on work too much
mincult	ethnic minorities should be given gov assistance
misswork	miss work for health past 30 days
mntlhlth	days of poor mental health past 30 days
mobile16	geographic mobility since age 16
mode	interview done in-person or over the phone
moredays	days per month r work extra hours
mustwork	mandatory to work extra hours
nafta1	how much heard or read about nafta?
nafta2a	america benefits from being a member of nafta?
nataid	foreign aid
nataidy	assistance to other countries – ver y
natarms	military, armaments, and defense
natarmsy	national defense – version y
natchld	assistance for childcare
natcity	solving problems of big cities
natcityy	assistance to big cities – version y
natcrime	halting rising crime rate
natcrimy	law enforcement – verison y
natdrug	dealing with drug addiction
natdrugy	drug rehabilitation – version y
nateduc	improving nations education system
nateducy	education – version y
natenrgy	developing alternative energy sources

natenvir	improving & protecting environment
natenviy	the environment – version y
natfare	welfare
natfarey	assistance to the poor – version y
natheal	improving & protecting nations health
nathealy	health – version y
natmass	mass transportation
natpark	parks and recreation
natrace	improving the conditions of blacks
natracey	assistance to blacks – version y
natroad	highways and bridges
natsci	supporting scientific research
natsoc	social security
natspac	space exploration program
natspacy	space exploration – version y
news	how often does r read newspaper
newsfrom	main source of information about events in the news
nextgen	science & tech. give more opportunities to next generation
notvote	citizens have right not to vote
ntcitvte	long-term residents should vote
ntwkhard	past week not work hard enough
numemps	number of employee for the self-employed
nummen	number of male sex partners since 18
numorg	number of people working in organization at all locations
numwomen	number of female sex partners since 18
obey	to obey
obeylaws	how important always to abey laws
opdevel	opportunity to develop my abilities
oppsegov	how important:citizen engage in acts of civil disobed
oth16	other protestant denominations
other	other protestant denominations
othersex	r had sex with some other last year
othjew	consider self to be jewish
othlang	can r speak language other than english
othlang1	what other languages does r speak
othlang2	what other languages does r speak
othreasn	how important to try to undrstnd reasonings of othr o
othshelp	people should help less fortunate others
oversamp	weights for black oversamples
overwork	r has too much work to do well
owngun	have gun in home
ownstock	r has stock in rs company
paidsex	r had sex for pay last year
painarms	r had pain in the arms in the past 12 months
paind10	fathers industry code (2010)
paocc10	fathers census occupation code (2010)
parborn	were rs parents born in this country
parcit	were your parents citizens of america?

parsol	rs living standard compared to parents
partfull	was r's work part-time or full-time?
partners	how many sex partners r had in last year
partnrs5	how many sex partners r had in last 5 years
partteam	r work as part of a team
partyid	political party affiliation
patriot1	patriotic feelings strengthen america's place in world
patriot2	patriotic feelings lead to intolerance in america
patriot3	patriotic feelings are needed for america to remain united
patriot4	patriotic feelings lead to negative feelings towards immigrants
pawrkslf	father self-emp. or worked for somebody
paytaxes	how important never to try to evade taxes
peocntct	how many people in contact in a typical weekday
peoptrbl	assisting people in trouble is very important
phase	subsampling: two-phase design.
phone	does r have telephone
physhlth	days of poor physical health past 30 days
pikupsex	r had sex with casual date last year
pillok	birth control to teenagers 14-16
pistol	pistol or revolver in home
polabuse	citizen said vulgar or obscene things
polactve	pol party encourge ppl to be active in politics in am
polattak	citizen attacking policeman with fists
poleff11	don't have any say about what the government does
poleff18	govt do not care much what ppl like r think
poleff19	r have a good understanding of pol issues
poleff20	most ppl are better informed about politics than r is
polescap	citizen attempting to escape custody
polfunds	donated money or raised funds for soc or pol activity
polgreed	most politicians are only for what get out of politics
polhitok	ever approve of police striking citizen
polint1	how interested in politics
polinter	expressed political views on internet past year
polmurdr	citizen questioned as murder suspect
polnews	how often use media to get political news
polopts	how important:ppl given chance to participate in deci
polviews	think of self as liberal or conservative
popespks	pope is infallible on matters of faith or morals
popular	to be well liked or popular
pornlaw	feelings about pornography laws
posslq	does r have marital partner
posslqy	relationship status and cohabitation or not
postlife	belief in life after death
powrorgs	intl orgs take away much power from american govt
pray	how often does r pray
prayer	bible prayer in public schools
premarsx	sex before marriage
pres08	vote obama or mccain

pres12	vote obama or romney
preteen	household members 6 thru 12 yrs old
prodctiv	work conditions allow productivity
promtefr	promotions are handled fairly
promteok	rs chances for promotion good
proudart	how proud its achievements in the arts & lit.
prouddem	how proud the way democracy works
proudeco	how proud america's economic achievements
proudemp	r proud to work for employer
proudgrp	how proud its fair and equal treatment
proudhis	how proud its history
proudmil	how proud america's armed forces
proudpol	how proud its political influence in the world
proudsci	how proud its scientific and tech achievements
proudspt	how proud its achievements in sports
proudsss	how proud its social security system
racdif1	differences due to discrimination
racdif2	differences due to inborn disability
racdif3	differences due to lack of education
racdif4	differences due to lack of will
raclive	any opp. race in neighborhood
racmeet	allowed to hold pub meeting for racist
racopen	vote on open housing law
racwork	racial makeup of workplace
radioact	sci knowledge:all radioactivity is man-made
rank	rs self ranking of social position
ratetone	r's facial coloring by interviewer
realinc	family income in constant $
realrinc	rs income in constant $
reborn	has r ever had a 'born again' experience
refrndms	referendum are good way to decide important pol quest
reg16	region of residence, age 16
relactiv	how often does r take part in relig activities
relatsex	relation to last sex partner
relig	rs religious preference
relig16	religion in which raised
reliten	strength of affiliation
relmeet	allowed to hold pub meeting for religious extremist
relpersn	r consider self a religious person
res16	type of place lived in when 16 yrs old
respect	r treated with respect at work
respnum	number in family of r
retchnge	r returned money after getting too much change
revmeet	allowed to hold pub meeting for ppl who want overthro
rghtsmin	how important:govt protect right of minorities
richwork	if rich, continue or stop working
rifle	rifle in home
rincblls	income alone is enough

rincom06	respondents income
rincome	respondents income
rowngun	does gun belong to r
safefrst	no shortcuts on worker safety
safehlth	safety and health condition good at work
safetywk	worker safety priority at work
satfin	satisfaction with financial situation
satjob	job or housework
satjob1	job satisfaction in general
savesoul	tried to convince others to accept jesus
scibnfts	benefits of sci research outweight harmful results
scifrom	main source of information about science and technology
scinews1	newspaper printed or online
scinews2	magazine printed or online
scinews3	where online get info
scistudy	r has clear understanding of scientific study
scitext	what it means to r to study scienfically
secondwk	r has job other than main
sector	type of college respondent attended
seeksci	probable source of information about scientific issues
selffrst	people need not overly worry about others
selfless	r feels like a selfless caring for others
servepeo	how committed govt admnstrators are to serve people
sexeduc	sex education in public schools
sexfreq	frequency of sex during last year
sexornt	sexual orientation
sexsex	sex of sex partners in last year
sexsex5	sex of sex partners last five years
shortcom	world better if america acknowledged shortcomings
shotgun	shotgun in home
sibs	number of brothers and sisters
signdpet	signed a petition
size	size of place in 1000s
slpprblm	trouble sleeping last 12 months
socbar	spend evening at bar
socfrend	spend evening with friends
socommun	spend evening with neighbor
socrel	spend evening with relatives
solarrev	sci knowledge:how long the earth goes around the sun
solok	how important:citizens have adequate standard of livi
spanking	favor spanking to discipline child
spden	specific denomination, spouse
spdipged	spouse diploma, ged, or other
spevwork	spouse ever work as long as a year
spfund	how fundamentalist is spouse currently
sphrs1	number of hrs spouse worked last week
sphrs2	no. of hrs spouse usually works a week
spind10	spouses industry code (naics 2007)

spkath	allow anti-religionist to speak
spkcom	allow communist to speak
spkhomo	allow homosexual to speak
spklang	how well does r speak other language
spkmil	allow militarist to speak
spkmslm	allow muslim clergymen preaching hatred of the us
spkrac	allow racist to speak
spocc10	spouse census occupation code (2010)
spother	other protestant denominations
sprel	spouses religious preference
sprtprsn	r consider self a spiritual person
spsector	type of college spouse attended
spvtrfair	supervisor is fair
spwrkslf	spouse self-emp. or works for somebody
spwrksta	spouse labor force status
stockops	r hold any stock options of rs company
stockval	total dollar value of rs stock
stress	how often does r find work stressful
stress12	stress management program last 12 months
strredpg	access to stress management
suicide1	suicide if incurable disease
suicide2	suicide if bankrupt
suicide3	suicide if dishonored family
suicide4	suicide if tired of living
supcares	supervisor concerned about welfare
suprvsjb	does r supervise others at work
suphelp	supervisor helpful to r in getting job done
talkedto	talked with someone depressed past 12 months
talkspvs	comfortable talking with supervisor about personal
tax	rs federal income tax
teamsafe	mgt and employees work together re safety
teens	household members 13 thru 17 yrs old
teensex	sex before marriage – teens 14-16
thnkself	to think for ones self
toofast	science makes our way of life change too fast
toofewwk	how often not enough staff
trdestck	company stock publicly traded
trdunion	workers need strong unions
trust	can people be trusted
trustman	r trust management at work
trynewjb	how likely r make effort for new job next year
tvhours	hours per day watching tv
unemp	ever unemployed in last ten yrs
union	does r or spouse belong to union
unrelat	number in household not related
uscitzn	is r us citizen
usedup	how often during past month r felt used up
usemedia	contacted in the media to express view

useskill	how much past skills can you make use in present
usetech	percentage of time use tech
usewww	r use www other than email
uswar	expect u.s. in war within 10 years
uswary	expect u.s. in world war in 10 years
valgiven	total donations past year r and immediate family
vetyears	years in armed forces
viruses	sci knowledge:antiviotics kill viruses as well as bacteria
visitors	number of visitors in household
voedcol	non-college postsecondary education (voednme1)
voednme1	postsecondary institution attended for credit
voedncol	non-college postsecondary education (voednme2)
voednme2	postsecondary institution attended for credit
volchrty	r done volunteer work for a charity
volmonth	volunteer in last month
vote08	did r vote in 2008 election
vote12	did r vote in 2012 election
voteelec	how important always to vote in elections
watchgov	how important to keep watch on action of govt
waypaid	how paid in main job
wealth	total wealth of respondent
webmob	r uses home internet through mobile device
weekswrk	weeks r. worked last year
weight	r weighs how much
whencol	when received college degree
whenhs	when received hs degree
whoelse1	presence of others:children under six
whoelse2	presence of others:older children
whoelse3	presence of others:spouse partner
whoelse4	presence of others:other relatives
whoelse5	presence of others:other adults
whoelse6	presence of others:no one
whywkhme	usual reason r work at home
widowed	ever been widowed
wkageism	r feels discriminated because of age
wkcontct	how often contacted about work when not working
wkdecide	how often r take part in decisions
wkfreedm	a lot of freedom to decide how to do job
wkharoth	r threatened on the job last 12 months
wkharsex	r sexually harassed on the job last 12 months
wkpraise	r is likely to be praised by supervisor
wkracism	r feels discriminated because of race
wksexism	r feels discriminated because of gender
wksmooth	workplace runs in smooth manner
wksub	does r or spouse have supervisor
wksubs	does supervisor have supervisor
wksup	does r or spouse supervise anyone
wksups	does subordinate supervise anyone

wkvsfam	how often job interferes fam life
wlthblks	rich - poor
wlthwhts	rich - poor
workblks	hard working - lazy
workdiff	r does numerous things on job
workfast	job requires r to work fast
workfor1	r work for whom
workhard	to work hard
workwhts	hard working - lazy
wrkgovt	govt or private employee
wrkhome	how often r works at home
wrksched	usual work schedule
wrkslf	r self-emp or works for somebody
wrkstat	labor force status
wrktime	r has enough time to get the job done
wrktype	work arrangement at main job
wrkwayup	blacks overcome prejudice without favors
wrldgovt	international bodies should enforce environment
wwwhr	www hours per week
wwwmin	www minutes per week
xmarsex	sex with person other than spouse
xmovie	seen x-rated movie in last year
xnorcsiz	expanded n.o.r.c. size code
yearsjob	time at current job
yearval	total dollar value of payments in that year

Source

Data: https://sda.berkeley.edu/sdaweb/analysis/?dataset=gss14

Codebook: https://burrelvannjr.com/docs/GSS_Codebook.pdf

---

howell_aids_long *Howell Student AIDS Knowledge Data (Long Form)*

Description

This data set, from Howell, measures students' knowledge at three time points, in long form.

Usage

```
howell_aids_long
```

Format

A data frame with 12 observations and 3 variables.

student	student id
time	time point measured
knowledge	student AIDS knowledge score (at various time points)

`howell_aids_wide` *Howell Student AIDS Knowledge Data (Wide Form)*

Description

This data set, from Howell, measures students' knowledge at three time points, in wide form.

Usage

```
howell_aids_wide
```

Format

A data frame with 4 observations and 4 variables.

student	student id
t1	student AIDS knowledge score at time 1
t2	student AIDS knowledge score at time 2
t3	student AIDS knowledge score at time 3

`hst` *Simplified Histogram*

Description

This function plots a histogram (hst) on a given data frame, and uses simplified calls within the function to parse the histogram by up to 2 variables.

Usage

```
hst(df, var1, by1, by2)
```

Arguments

df	data frame to read in.
var1	the dependent/outcome variable, Y. The variable of interest that should be plotted.
by1	the main independent/predictor variable, X_1. A grouping variable by which the histogram for var1 should be parsed.
by2	a potential second independent/predictor variable, X_2. A second grouping variable by which the histogram for var1 (already parsed by by1) should be parsed.

Value

This function returns the histogram for var1 in data frame df. Can be split to return a histogram for var1 in data frame df, broken out by var2.

Examples

```
data <- mtcars

hst(data,mpg,cyl)
```

---

is.t *Simplified Independent Samples T-Test*

Description

This function simplifies the call for the independent samples t-test (is.t) on a given data frame.

Usage

```
is.t(df, var1, var2, var.equal = TRUE, two.tailed = TRUE)
```

Arguments

df	data frame to read in.
var1	the dependent/outcome variable, Y.
var2	the main independent/predictor variable, X.
var.equal	logical (default set to T). When set to var.equal = F, will employ Welsh's correction to the t-test (for data that violate the equal variances assumption).
two.tailed	logical (default set to T). When set to two.tailed = F, will return results of a one-sided t-test.

Value

This function returns the summary results table for an independent samples t-test, examining the mean differences of var1 (in data frame df) between groups in var2.

Examples

```
data <- mtcars

ttest <- is.t(data,mpg,am)
summary(ttest)
```

---

mode *Mode Function*

Description

This function returns the mode for a given data frame.

Usage

```
mode(x, na.rm = FALSE)
```

Arguments

x	variable within data frame or a list of values.
na.rm	remove the NAs, default is FALSE.

Value

This function returns the mode for a variable within a data frame or a list of values.

Examples

```
data <- mtcars

mode(data$mpg)
```

---

os.t *Simplified One Sample T-Test*

Description

This function simplifies the call for the one sample t-test (os.t) on a given data frame.

Usage

```
os.t(df, var1, mu)
```

Arguments

df	data frame to read in.
var1	the dependent/outcome variable, Y.
mu	the population mean, μ.

Value

This function returns the summary results table for an one sample t-test, examining the mean differences between var1 (in data frame df) and the population mean mu.

Examples

```
data <- mtcars

ttest <- os.t(data,mpg,3)
summary(ttest)
```

---

ow.anova *Simplified One-Way Analysis of Variance*

Description

This function simplifies the call for one-way ANOVA (ow.anova) on a given data frame. Also allows calls for Tukey's Honestly Significant Difference Post-Hoc Comparisons Test (hsd), as well as a means plot (plot).

Usage

```
ow.anova(df, var1, by1, plot = FALSE, hsd = FALSE)
```

Arguments

df	data frame to read in.
var1	the dependent/outcome variable, Y.
by1	the main independent/predictor variable, X. A grouping variable by which var1 should be parsed.
plot	logical (default set to F). When set to plot = T, will return a means plot with 95 percent confidence intervals, broken out by each group (by1).
hsd	logical (default set to F). When set to hsd = T, will return results of Tukey's Honestly Significant Difference Post-Hoc Comparisons Test.

Value

This function returns the summary results table for a one-way ANOVA, examining mean differences in var1 from data frame df, across by1 groups.

Examples

```
data <- mtcars

ow <- ow.anova(data,mpg,cyl,plot=TRUE)
summary(ow)
```

`p.corr` *Simplified Correlation*

Description

This function simplifies the call for Pearson's Product-Moment Correlation Coefficient (p.corr) on a given data frame.

Usage

```
p.corr(df, var1, var2)
```

Arguments

`df`	data frame to read in.
`var1`	the dependent/outcome variable, Y.
`var2`	the main independent/predictor variable, X.

Value

This function returns the summary results table for a Pearson's correlation, examining the relationship between `var1` from data frame `df`, and `var2`.

Examples

```
data <- mtcars

p.corr(data,mpg,wt)
```

ps.t *Simplified Paired Samples (Repeated Measures) T-Test*

Description

This function simplifies the call for the paired samples t-test (ps.t) on a given data frame.

Usage

```
ps.t(df, t2, t1, var.equal = TRUE)
```

Arguments

df	data frame to read in.
t2	the t_2 or post-test variable.
t1	the t_1 or pre-test variable.
var.equal	logical (default set to T). When set to var.equal = F, will employ Welsh's correction to the t-test (for data that violate the equal variances assumption).

Value

This function returns the summary results table for an paired samples t-test, examining the mean differences between t2 and t1 (in data frame df).

Examples

```
data <- mtcars
data$mpg2 <- c(21.8,14.7,5.9,24.0,12.2,14.9,33.0,27.7,
29.9,33.9,16.0,14.7,13.3,23.1,38.0,39.7,24.1,33.9,
25.7,24.2,28.3,37.3,20.3,36.0,18.1,32.8,28.7,30.3,6.6,
26.4,35.8,32.8)

ttest <- ps.t(data,mpg2,mpg)
summary(ttest)
```

qq *Simplified Normal (Q-Q) Plot*

Description

This function plots a Q-Q/Quantile-Quantile plot (qq) on a given data frame, and uses simplified calls within the function to parse the Q-Q plot by up to 2 variables.

Usage

```
qq(df, var1, by1, by2)
```

Arguments

df	data frame to read in.
var1	the dependent/outcome variable, Y. The variable of interest that should be plotted.
by1	the main independent/predictor variable, X_1. A grouping variable by which the Q-Q plot for var1 should be parsed.
by2	a potential second independent/predictor variable, X_2. A second grouping variable by which the Q-Q plot for var1 (already parsed by by1) should be parsed.

Value

This function returns the quantile-quantile plot for var1 in data frame df. Can be split to return a quantile-quantile plot for var1 in data frame df, broken out by var2.

Examples

```
data <- mtcars

qq(data,mpg,cyl)
```

---

residplot *Simplified Residuals Plot*

Description

This function creates a residual plot (residplot) on a data frame of the variables in an equation.

Usage

```
residplot(df, formula)
```

Arguments

df	data frame to read in.
formula	the variables in the regression model, $Y = X_1 + X_2 + ... + X_m$, written as Y ~ X1 + X2...

Examples

```
data <- mtcars

residplot(data, mpg ~ wt + am)
```

revcode *Reverse Coding for Scales*

Description

This function applies reverse-coding to a variable of interest.

Usage

```
revcode(df, var, missing = c(""))
```

Arguments

df	data frame to read in.
var	the variable to be recoded.
missing	a list of values in the variable that are "missing" values.

Value

This function updates the data frame with a new variable with the recoded values.

Examples

```
data <- GSS2014

revcode(data, amcult)
```

rm.anova *Simplified One-Way Repeated Measures Analysis of Variance*

Description

This function simplifies the call for repeated measures ANOVA (rm.anova) on a given data frame. Also allows calls for sphericity correction (correct), as well as a sphericity test table (sph).

Usage

```
rm.anova(
  df,
  id,
  times,
  scores = NULL,
  correct = TRUE,
  sph = FALSE,
  phc = FALSE
)
```

Arguments

df	data frame to read in.
id	the main grouping variable by which times will be analyzed
times	dependent variable values at the time points measured. If data are in wide form (where time points are listed as separate variables for each observation), read in as a list of time point variables (e.g. c("t1", "t2", "t3", ..., "tn")), where the values represent the scores at the various time points. Read in as list if data are in wide form. If data are in long form, the times variable is one column (rather than multiple columns) in the data frame, and must be paired with the scores variable for actual values (listed below).
scores	if data are in long form (where each group has multiple observations), a scores variable must be read in, which represents the values at the specific time points represented in the times variable.
correct	logical (default set to T). Corrects the results in the repeated measures ANOVA table – adjusts the degrees of freedom (df) by multiplying the sphericity assumed degrees of freedom (df) by the Greenhouse-Geisser Epsilon value. When set to correct = F, will print results of repeated measures ANOVA with sphericity assumed.
sph	logical (default set to F). When set to sph = T, will print a sphericity tests table with Mauchly's W, as well as two Epsilon values (Greenhouse-Geisser and Huynh-Feldt).
phc	logical (default set to F). When set to phc = T, will print a post-hoc comparisons table with Bonferroni's adjusted alpha levels (and p-values).

Examples

```
data <- howell_aids_wide
rm.anova(data, student, c("t1","t2","t3"))

data2 <- howell_aids_long
rm.anova(data2, student, time, scores=knowledge)
```

---

scatter *Simplified Scatterplot*

Description

This function plots a scatterplot (scatter) on a given data frame, and adds a fit-line to the data.

Usage

```
scatter(df, var1, var2, lab = FALSE)
```

Arguments

df	data frame to read in.
var1	the dependent/outcome variable, Y.
var2	the independent/predictor variable, X.
lab	logical (default set to FALSE). When set to lab = TRUE, will add Pearson's correlation coefficient (r) value to the plot.

Examples

```
data <- mtcars

scatter(data,mpg,wt)
```

---

se *Standard Error Calculation*

Description

This function calculates the standard error for a variable in a given data frame.

Usage

```
se(var, na.rm = TRUE)
```

Arguments

var	variable to read in.
na.rm	logical (default set to T). When set to na.rm = F, will include NA's in calculation.

Value

This function returns the standard error for a given variable

Examples

```
data <- mtcars

se(data$mpg)
```

stata.plm.margins *Simplified STATA Predictive Margins*

Description

This function returns a data frame with interactive margins and standard errors similar to those returned in the STATA margins call. The function can also return a margins plot.

Usage

```
stata.plm.margins(mod, plot = FALSE, error = NULL)
```

Arguments

mod	a plm model object.
plot	logical (default set to FALSE). When set to plot = TRUE, will return a an margins plot of the interaction terms.
error	the number standard deviation units for which the margins will be calculated (default set to 2).

Value

This function creates a data frame of predictive margins for the dependent variable, given values of the variables in the interaction.

Examples

```
library(plm)
data <- UCR2015
summary(mod <- plm(dui_pct ~ pct_poverty*pct_unemp +
income_inequality, data=data, index=c("state","county"),
model="within"))

stata.plm.margins(mod)
```

summary.chisquare *Summarize Results of chi.sq*

Description

Displays results of chi.sq

Usage

```
## S3 method for class 'chisquare'
summary(object, ...)
```

Arguments

object	Object returned by chi.sq.
...	Additional parameters to pass on.

Value

Matrix of values for results from chi square test.

Examples

```
data1 <- mtcars
x2 <- chi.sq(data1, vs, am)

summary(x2)
```

---

summary.ist *Summarize Results of is.t*

Description

Displays results of is.t

Usage

```
## S3 method for class 'ist'
summary(object, ...)
```

Arguments

object	Object returned by is.t.
...	Additional parameters to pass on.

Value

Matrix of values for results from independent samples t-test.

Examples

```
data1 <- mtcars
ttest <- is.t(data1, mpg, am)

summary(ttest)
```

summary.oneway *Summarize Results of ow.anova*

Description

Displays results of ow.anova

Usage

```
## S3 method for class 'oneway'
summary(object, ...)
```

Arguments

object	Object returned by ow.anova.
...	Additional parameters to pass on.

Value

Matrix of values for results from One-Way ANOVA test.

Examples

```
data1 <- mtcars
ow <- ow.anova(data1, mpg, cyl)

summary(ow)
```

summary.ost *Summarize Results of os.t*

Description

Displays results of os.t

Usage

```
## S3 method for class 'ost'
summary(object, ...)
```

Arguments

object	Object returned by os.t.
...	Additional parameters to pass on.

Value

Matrix of values for results from one sample t-test.

Examples

```
data1 <- mtcars
ttest <- os.t(data1,mpg,3)

summary(ttest)
```

`summary.pst` *Summarize Results of ps.t*

Description

Displays results of ps.t

Usage

```
## S3 method for class 'pst'
summary(object, ...)
```

Arguments

`object`	Object returned by `ps.t`.
`...`	Additional parameters to pass on.

Value

Matrix of values for results from paired samples t-test.

Examples

```
data1 <- mtcars
data1$mpg2 <- c(21.8,14.7,5.9,24.0,12.2,14.9,33.0,27.7,
29.9,33.9,16.0,14.7,13.3,23.1,38.0,39.7,24.1,33.9,
25.7,24.2,28.3,37.3,20.3,36.0,18.1,32.8,28.7,30.3,6.6,
26.4,35.8,32.8)

ttest <- ps.t(data1,mpg2,mpg)

summary(ttest)
```

tab *Simplified Crosstabs*

Description

This function returns a crosstab (tab) on a given data frame, and using simplified calls within the function for two variables, to return the observed and expected frequencies.

Usage

```
tab(df, var1, var2)
```

Arguments

df	data frame to read in.
var1	a first grouping variable.
var2	a second grouping variable.

Value

This function returns the observed and expected frequencies of a bivariate relationship between var1 and var2 in data frame df.

Examples

```
data <- mtcars

tab(data,mpg,cyl)
```

UCR2015 *Uniform Crime Reports, 2015 (County-Level)*

Description

This subset of data comes from one iteration of the *Uniform Crime Reporting Program*, administered in 2015. These data were collected by the Federal Bureau of Investigation under the United States Department of Justice. While the original data cover every *reported* crime event that took place in 2015, these data are aggregated to the county level. Additionally, these data are combined with (a subset of) county-level demographic data from the 2005-2009 (5-year estimates) iteration of the *American Community Survey*. Information about the data set can be found in the UCR2015 Codebook at: https://burrelvannjr.com/docs/UCR2015_Codebook.pdf.

Usage

```
UCR2015
```

Format

A data frame with 3108 observations and 102 variables.

id	State and County Identifier
statefips	FIPS Code for State
countyfips	FIPS Code for County
state	State Name
county	County Name
totalpop	Total County Population
pct_unemp	Percent of Total County Population who are Unemployed
pct_homeowners	Percent of Total County Population who are Homeowners
pct_college	Percent of Total County Population who are over 25 years old and hold a Bachelor's Degree
med_fam_inc	Median Family Income (in Thousands of Dollars)
pop_density	Population Density (Population over Land Area in County)
pct_poverty	Percent of Total County Population who are below the Poverty Line
pct_white	Percent of Total County Population who are White
pct_black	Percent of Total County Population who are Black
pct_latino	Percent of Total County Population who are Latinx/e/a/o
income_inequality	Gini Coefficient of Income Inequality – The distribution of income across the county populat
rape	Forcible rape (Count)
robbery	Robbery (Count)
agg_assault	Aggravated assault (Count)
burglary	Burglary-breaking or entering (Count)
larceny	Larceny-theft (not motor vehicles) (Count)
mv_theft	Motor vehicle theft (Count)
other_assault	Other assaults (Count)
arson	Arson (Count)
forgery	Forgery and counterfeiting (Count)
fraud	Fraud (Count)
embezzlement	Embezzlement (Count)
stolen_property	Stolen property-buy, receive, poss. (Count)
vandalism	Vandalism (Count)
weapons	Weapons-carry, posses, etc. (Count)
sex_offense	Sex offenses (not rape or prostitution) (Count)
drug_abuse	Total drug abuse violations (Count)
drug_sale	Sale/manufacture (subtotal) (Count)
drug_possession	Possession (subtotal) (Count)
drug_sale_coke	Sale/mfg-Opium, coke, and their derivatives (Count)
drug_sale_mj	Sale/mfg-Marijuana (Count)
drug_possession_coke	Possession-Opium, coke, and their derivatives (Count)
drug_possession_mj	Possession-Marijuana (Count)
drug_possession_narc	Possession-Truly addicting synthetic narcotics (Count)
drug_possession_other	Possession-Other dangerous non-narc drugs (Count)
domestic_offenses	Offenses against family and children (Count)
dui	Driving under the influence (Count)
liquor_violation	Liquor laws (Count)
disorderly_conduct	Disorderly conduct (Count)

other_nontraffic_violation	All other non-traffic offenses (Count)
murder	Murder and non-negligent manslaughter (Count)
drug_sale_other	Sale/mfg-Other dangerous non-narc drugs (Count)
prostitution	Prostitution and commercialized vice (Count)
drug_sale_narc	Sale/mfg-Truly addicting synthetic narcotics (Count)
vagrancy	Vagrancy (Count)
drunkenness	Drunkenness (Count)
curfew_loitering	Curfew and loitering violations (Count)
runaway	Runaways (Count)
manslaughter_negligence	Manslaughter by negligence (Count)
gambling_all	Gambling (total) (Count)
suspicion	Suspicion (Count)
gambling_bookmaking	Bookmaking (horse and sports) (Count)
gambling_other	All other gambling (Count)
gambling_lottery	Number and lottery (Count)
rape_pct	Forcible rape (as percent of total county population)
robbery_pct	Robbery (as percent of total county population)
agg_assault_pct	Aggravated assault (as percent of total county population)
burglary_pct	Burglary-breaking or entering (as percent of total county population)
larceny_pct	Larceny-theft (not motor vehicles) (as percent of total county population)
mv_theft_pct	Motor vehicle theft (as percent of total county population)
other_assault_pct	Other assaults (as percent of total county population)
arson_pct	Arson (as percent of total county population)
forgery_pct	Forgery and counterfeiting (as percent of total county population)
fraud_pct	Fraud (as percent of total county population)
embezzlement_pct	Embezzlement (as percent of total county population)
stolen_property_pct	Stolen property-buy, receive, poss. (as percent of total county population)
vandalism_pct	Vandalism (as percent of total county population)
weapons_pct	Weapons-carry, posses, etc. (as percent of total county population)
sex_offense_pct	Sex offenses (not rape or prostitution) (as percent of total county population)
drug_abuse_pct	Total drug abuse violations (as percent of total county population)
drug_sale_pct	Sale/manufacture (subtotal) (as percent of total county population)
drug_possession_pct	Possession (subtotal) (as percent of total county population)
drug_sale_coke_pct	Sale/mfg-Opium, coke, and their derivatives (as percent of total county population)
drug_sale_mj_pct	Sale/mfg-Marijuana (as percent of total county population)
drug_possession_coke_pct	Possession-Opium, coke, and their derivatives (as percent of total county population)
drug_possession_mj_pct	Possession-Marijuana (as percent of total county population)
drug_possession_narc_pct	Possession-Truly addicting synthetic narcotics (as percent of total county population)
drug_possession_other_pct	Possession-Other dangerous non-narc drugs (as percent of total county population)
domestic_offenses_pct	Offenses against family and children (as percent of total county population)
dui_pct	Driving under the influence (as percent of total county population)
liquor_violation_pct	Liquor laws (as percent of total county population)
disorderly_conduct_pct	Disorderly conduct (as percent of total county population)
other_nontraffic_violation_pct	All other non-traffic offenses (as percent of total county population)
murder_pct	Murder and non-negligent manslaughter (as percent of total county population)
drug_sale_other_pct	Sale/mfg-Other dangerous non-narc drugs (as percent of total county population)
prostitution_pct	Prostitution and commercialized vice (as percent of total county population)
drug_sale_narc_pct	Sale/mfg-Truly addicting synthetic narcotics (as percent of total county population)

vagrancy_pct	Vagrancy (as percent of total county population)
drunkenness_pct	Drunkenness (as percent of total county population)
curfew_loitering_pct	Curfew and loitering violations (as percent of total county population)
runaway_pct	Runaways (as percent of total county population)
manslaughter_negligence_pct	Manslaughter by negligence (as percent of total county population)
gambling_all_pct	Gambling (total) (as percent of total county population)
suspicion_pct	Suspicion (as percent of total county population)
gambling_bookmaking_pct	Bookmaking (horse and sports) (as percent of total county population)
gambling_other_pct	All other gambling (as percent of total county population)
gambling_lottery_pct	Number and lottery (as percent of total county population)

Source

Data: https://www.icpsr.umich.edu/web/NACJD/studies/36794 and https://data.census.gov/app/mdat/ACSPUMS1Y2023

Codebook: https://burrelvannjr.com/docs/UCR2015_Codebook.pdf

`univ.desc` *Simplified Descriptive Statistics*

Description

This function returns univariate/descriptive statistics (univ.desc) on a variable within a given data frame, and uses simplified calls within the function to parse the descriptives by another variable.

Usage

```
univ.desc(df, var1, by1)
```

Arguments

`df`	data frame to read in.
`var1`	the dependent/outcome variable, Y. The variable of interest .
`by1`	the main independent/predictor variable, X_1. A grouping variable by which the descriptive statistics for `var1` should be parsed.

Value

This function returns the descriptive statistics for `var1` in data frame `df`. Can be split to return descriptives for `var1` in data frame `df`, broken out by `var2`.

Examples

```
data <- mtcars

univ.desc(data,mpg)
```

WBBN2019 *Well-Being and Basic Needs Survey, 2019 (Individual-Level)*

Description

This subset of data comes from one iteration of the *Well-Being and Basic Needs Survey*, administered in 2019. These data were collected by the Urban Institute. Information about the data set can be found in the WBBN2019 Codebook at: https://burrelvannjr.com/docs/WBBN2019_Codebook.pdf.

Usage

```
WBBN2019
```

Format

A data frame with 7694 observations and 23 variables.

subsidized_housing	Is your household paying lower rent because the federal, state, or local government is paying part c
food_last	Food did not last
nervous	During the past 30 days, about how often did you feel: nervous?
hopeless	During the past 30 days, about how often did you feel: hopeless?
restless	During the past 30 days, about how often did you feel: restless or fidgety?
no_cheer	During the past 30 days, about how often did you feel: so sad that nothing could cheer you up
worthless	During the past 30 days, about how often did you feel: worthless?
insured	Thinking about your health insurance coverage over the past 12 months, how many months were y
med_notafford	Thinking about your health care experiences over the past 12 months, was there any time when you
working	Are you currently working for pay or self-employed?
unexp_400	How confident are you that you could come up with $400 if an unexpected expense arose within th
educ	Education level
race_eth	Race/ethnicity
sex_gender	Sex/Gender
head_household	Head of Household?
internet	Internet access
children_in_house	Number of children age 0-18 in household
food_insecure	Household was food insecure in past 12 months
utility_suspend	Gas or electric company turned off service or oil company would not deliver in oil past 12 months
utility_problems_paying	Household was not able to pay full amount of gas, oil, or electricity bills in past 12 months
mortgage_cost	How much is the regular monthly payment on this property, including mortgage payments, second
rent_cost	What is the monthly rent for the place where you live?
electricity_cost	In a typical month, what is the total cost of electricity, gas, and any other fuel used in the place whe

Source

Data: https://www.icpsr.umich.edu/web/ICPSR/studies/38044

Codebook: https://burrelvannjr.com/docs/WBBN2019_Codebook.pdf

z.calc *Simplified Z Scores*

Description

This function calculates the Z score for a given value, relative to the mean and standard deviation for a variable in a given data frame.

Usage

```
z.calc(df, var1, raw, tails = NULL)
```

Arguments

df	data frame to read in.
var1	the variable of interest for which the mean and standard deviations will be calculated.
raw	the desired raw score to compare with the mean and standard deviation of var1.
tails	to report a p-value (level of significance) for the reported Z score, user must select a desired number of tails (either tails = 1 for a one-tailed test, or tails = 2 for a two-tailed test). Default set to NULL, and does not report a p-value.

Value

This function returns the raw score, mean, and z-score for a given raw score.

Examples

```
data <- mtcars

z.calc(data,mpg,12)
```

z.test *Simplified Z Tests*

Description

This function runs a one-sample Z-test, comparing the proportion in your sample to the proportion in the population.

Usage

```
z.test(df, var1, var2, prop)
```

Arguments

df	data frame to read in.
var1	variable with the total number of events, by sub-unit (e.g. cities within a county).
var2	variable with number of events for a specific group.
prop	proportion to compare to (between 0 and 1).

Value

This function returns the Z score and p-value for the z-test.

Examples

```
data <- UCR2015[UCR2015$state=="California",]
data$total_part2 <- data$burglary + data$larceny + data$mv_theft + data$arson

z.test(data,total_part2,burglary,.25)
```

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