Package: vannstats (via r-universe)

November 3, 2024

Title Si	implified Statistics for PA 606
Version	1.3.4.14
m de sii co su	tion Simplifies functions assess normality for bivariate and aultivariate statistical techniques. Includes functions esigned to replicate plots and tables that would result from milar calls in 'SPSS', including hst(), box(), qq(), tab(), primat(), and residplot(). Also includes simplified formulae, ach as mode(), scatter(), p.corr(), ow.anova(), and n.anova().
Depend	s R (>= 3.2.3)
_	s gdata, plm, dplyr, ggplot2, rlang, purrr, stats, graphics, ormula.tools, gplots, rstatix, stringr, ggrepel, ggpubr
License	GPL-3
LazyDa	ta true
NeedsC	ompilation no
Roxyge	nNote 7.2.2
	Burrel Vann Jr [aut, cre] chttps://orcid.org/0000-0003-3066-5815>)
Maintai	iner Burrel Vann Jr bvannjr@sdsu.edu>
Reposit	ory CRAN
Date/Pu	ublication 2023-04-15 04:30:02 UTC
Conto	ents
	bar.chart

2 bar.chart

	howell_aids_wide	1
	hst	2
	mode	2
	ow.anova	3
	p.corr	4
	qq	4
	residplot	5
	revcode	6
	rm.anova	6
	scatter	7
	stata.plm.margins	8
	tab	9
	UCR2015	9
	WBBN2019	2
	z.calc	3
Index	3.	5
		_

Description

bar.chart

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

Simplified Bar Chart

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.

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)</pre>
```

box 3

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)</pre>
```

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)
```

4 ci.calc

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 using Bonferroni's alpha adjustment.

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
chi.sq(data,vs,am)</pre>
```

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)</pre>
```

cormat 5

cor		

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)</pre>
```

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)</pre>
```

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.

1d	respondent id number
age	age of respondent
sex	respondents sex
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

immerime 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

affetlaw how lliely congress give serious attention to rs dema

affrmact favor preference in hiring blacks aged should aged live with their children

aidsendm condom can reduce aids

aidslook a health-look person may have aids 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 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 r free from conflicting demands

condom used condom last time

condrift sci knowledge:the continents have been moving

coneduc confidence in education

confied confid. in exec branch of fed govt confinan 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 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 supervisor effective solve work/personal conflicts how fair last natl election:opprtunities of candidate electron sci knowledge:electrons are smaller than atoms 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 eqwith 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 feehld 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

givehrty 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
happar 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 helpiob 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 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

intlines 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 intech interested in technologies jobfind could r find equally good job 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

jobsec 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 ethnic minorities should be given gov assistance

misswork miss work for health past 30 days 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 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

natspacspace exploration programnatspacyspace exploration – version ynewshow 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 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 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 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 work conditions allow productivity promtefr promotions are handled fairly 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 differences due to inborn disability racdif2 racdif3 differences due to lack of education differences due to lack of will racdif4 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

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 satisf 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

favor spanking to discipline child spanking 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

spocc 10 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

spytrfair 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 stress 12 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 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

trust 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

voedcolnon-college postsecondary education (voednme1)voednme1postsecondary institution attended for creditvoedncolnon-college postsecondary education (voednme2)voednme2postsecondary institution attended for credit

volchrty r done volunteer work for a charity

volmonth vote08 vote12 volunteer in last month did r vote in 2008 election 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

20 howell_aids_long

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 does r or spouse have supervisor wksub wksubs does supervisor have supervisor wksup does r or spouse supervise anyone wksups does subordinate supervise anyone how often job interferes fam life wkvsfam

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

www.hr www.hours.per.week www.min 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_wide 21

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

22 mode

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, ${\cal Y}.$ 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)</pre>
```

mode	Mode Function

Description

This function returns the mode for a given data frame.

Usage

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

ow.anova 23

Arguments

Χ	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)</pre>
```

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.anova(data,mpg,cyl,plot=TRUE)</pre>
```

qq

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)</pre>
```

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)
```

residplot 25

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)</pre>
```

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)</pre>
```

26 rm.anova

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)</pre>
```

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
)
```

scatter 27

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 spheric-

ity assumed.

sph logical (default set to F). When set to sph = T, will print a sphericity tests ta-

ble 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)</pre>
```

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)
```

28 stata.plm.margins

Arguments

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 cor-

relation coefficient (r) value to the plot.

Examples

```
data <- mtcars
scatter(data,mpg,wt)</pre>
```

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)</pre>
```

tab 29

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)</pre>
```

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

30 *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

total pop 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 population

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 (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
drug_possession_other
domestic offenses

Possession-Truly addicting synthetic narcotics (Count)
Possession-Other dangerous non-narc drugs (Count)
Offenses against family and children (Count)

dui Driving under the influence (Count)

liquor_violation Liquor laws (Count)
disorderly_conduct Disorderly conduct (Count)

UCR2015 31

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)

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
drug_sale_pct
drug_sale_pct
drug_possession_pct

Total drug abuse violations (as percent of total county population)
Sale/manufacture (subtotal) (as percent of total county population)
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
drug_possession_other_pct
domestic_offenses_pct

Possession-Truly addicting synthetic narcotics (as percent of total county population)
Possession-Other dangerous non-narc drugs (as percent of total county population)
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)

32 WBBN2019

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/mdat/#/search?ds=ACSPUMS5Y2009

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

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 of

food_last Food did not last

nervous During the past 30 days, about how often did you feel: nervous? 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?

z.calc 33

unexp_400 How confident are you that you could come up with \$400 if an unexpected expense arose within the

educ Education level race_eth Race/ethnicity sex_gender Sex/Gender

head_household Head of Household? Internet access

children_in_house Number of children age 0-18 in household food_insecure Household was food insecure in past 12 months

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 who

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 cal-

culated.

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.

34 z.calc

Examples

```
data <- mtcars
z.calc(data,mpg,12)</pre>
```

Index

```
* datasets
    GSS2014, 6
    \verb|howell_aids_long|, 20|
    howell_aids_wide, 21
    UCR2015, 29
    WBBN2019, 32
bar.chart, 2
box, 3
chi.sq, 3
ci.calc,4
cormat, 5
dummy, 5
GSS2014, 6
\verb|howell_aids_long|, 20|
howell\_aids\_wide, \textcolor{red}{21}
hst, 22
mode, 22
ow.anova, 23
p.corr, 24
qq, 24
residplot, 25
revcode, 26
rm. anova, 26
scatter, 27
stata.plm.margins, 28
tab, 29
UCR2015, 29
WBBN2019, 32
z.calc, 33
```