Package ‘vannstats’

June 16, 2021

Title  Simplified Statistics for PA 606
Version  1.0.7.15
Description  Simplifies functions assess normality for bivariate and multivariate statistical techniques, including hst(), box(), and qq(). Plots designed to replicate those that would result from similar calls in 'SPSS'. Also includes simplified formulae, such as mode(), scatter(), and ow.anova().

Depends  R (>= 3.2.3)
Imports  MASS, dplyr, ggplot2, rlang, tidyverse, car, purrr, stats, graphics, formula.tools, gplots
License  GPL-3
LazyData  true
NeedsCompilation  no
Author  Burrel Vann Jr [aut, cre]
Maintainer  Burrel Vann Jr <bvannjr@sdsu.edu>
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R topics documented:

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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**  
\[
\text{box}(\text{df}, \text{var1}, \text{by1}, \text{by2})
\]

**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 \( \text{var1} \) should be parsed.
- `by2` a potential second independent/predictor variable, \( X_2 \). A second grouping variable by which the boxplot for \( \text{var1} \) (already parsed by \( \text{by1} \)) should be parsed.

**Examples**  
\[
\text{data} \leftarrow \text{mtcars}
\]
\[
\text{box(data, mpg, cyl)}
\]

---

**cormat**  
*Simplified Correlation Matrix*

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

**Usage**  
\[
\text{cormat}(\text{df}, \text{formula})
\]

**Arguments**  
- `df` data frame to read in.
- `formula` the variables in the regression model, \( Y = X_1 + X_2 + ... + X_m \), written as \( Y \sim X_1 + X_2 \)...
Value

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

Examples

data <- mtcars
cormat(data, mpg ~ wt + am)

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: http://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
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
imcrime  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
acptoth  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
amchristn  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
amspornts  agree sports makes me proud to be an american
amtv  tv should give preference to american films
arthritis  told have arthritis or rheumatism
astrology  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
betrlfe  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  people 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
chnggeoth  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
clsonoam  how close do you feel to north america
clsestat  how close do you feel to your state
clesetown  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
colah  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
colrasci  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
comprehend  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
decorsgs 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
disaff whites hurt by aff. action
disaffm a man won’t get a job or promotion
disafff 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:opportunities of candidate
electron sci knowledge:electrons are smaller than atoms
elevote 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
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>evolved</td>
<td>sci knowledge: human beings developed from animals</td>
</tr>
<tr>
<td>evpaidsx</td>
<td>ever have sex paid for or being paid since 18</td>
</tr>
<tr>
<td>evstray</td>
<td>have sex other than spouse while married</td>
</tr>
<tr>
<td>evwork</td>
<td>ever work as long as one year</td>
</tr>
<tr>
<td>excludimm</td>
<td>America should exclude illegal immigrants</td>
</tr>
<tr>
<td>expdesgn</td>
<td>better way to test drug btw control and non-control</td>
</tr>
<tr>
<td>expext</td>
<td>why is it better to test drug this way</td>
</tr>
<tr>
<td>extrapay</td>
<td>eligible for performance based pay</td>
</tr>
<tr>
<td>extrar</td>
<td>year of the most recent perf based payments</td>
</tr>
<tr>
<td>fair</td>
<td>people fair or try to take advantage</td>
</tr>
<tr>
<td>fairearn</td>
<td>how fair is what r earn on the job</td>
</tr>
<tr>
<td>famgen</td>
<td>number of family generations in household</td>
</tr>
<tr>
<td>family16</td>
<td>living with parents when 16 yrs old</td>
</tr>
<tr>
<td>famvswk</td>
<td>how often fam life interfere job</td>
</tr>
<tr>
<td>famwkoff</td>
<td>how hard to take time off</td>
</tr>
<tr>
<td>fear</td>
<td>afraid to walk at night in neighborhood</td>
</tr>
<tr>
<td>fechld</td>
<td>mother working doesn't hurt children</td>
</tr>
<tr>
<td>feelevel</td>
<td>amount of fees paid</td>
</tr>
<tr>
<td>feused</td>
<td>fee given to get case</td>
</tr>
<tr>
<td>fefam</td>
<td>better for man to work, woman tend home</td>
</tr>
<tr>
<td>fehire</td>
<td>should hire and promote women</td>
</tr>
<tr>
<td>fejobaff</td>
<td>for or against preferential hiring of women</td>
</tr>
<tr>
<td>fepol</td>
<td>women not suited for politics</td>
</tr>
<tr>
<td>fepresch</td>
<td>preschool kids suffer if mother works</td>
</tr>
<tr>
<td>finalter</td>
<td>change in financial situation</td>
</tr>
<tr>
<td>finrela</td>
<td>opinion of family income</td>
</tr>
<tr>
<td>forland</td>
<td>foreigners should not be allowed to buy land</td>
</tr>
<tr>
<td>form</td>
<td>form of split questionnaire asked</td>
</tr>
<tr>
<td>freetrde</td>
<td>free trade leads to better products</td>
</tr>
<tr>
<td>fringeok</td>
<td>fringe benefits are good</td>
</tr>
<tr>
<td>frndsex</td>
<td>r had sex with friend last year</td>
</tr>
<tr>
<td>fucitzn</td>
<td>is r planning/appling for us citizenship or not</td>
</tr>
<tr>
<td>fund</td>
<td>how fundamentalist is r currently</td>
</tr>
<tr>
<td>fund16</td>
<td>how fundamentalist was r at age 16</td>
</tr>
<tr>
<td>getahead</td>
<td>opinion of how people get ahead</td>
</tr>
<tr>
<td>givblood</td>
<td>r donated blood during the past 12 months</td>
</tr>
<tr>
<td>givchrty</td>
<td>r has given money to a charity</td>
</tr>
<tr>
<td>givhmcss</td>
<td>r has given food or money to a homeless person</td>
</tr>
<tr>
<td>givseat</td>
<td>r offered seat to a stranger during past 12 months</td>
</tr>
<tr>
<td>god</td>
<td>rs confidence in the existence of god</td>
</tr>
<tr>
<td>goodlife</td>
<td>standard of living of r will improve</td>
</tr>
<tr>
<td>govdook</td>
<td>we can trust people in govt</td>
</tr>
<tr>
<td>granborn</td>
<td>how many grandparents born outside u.s.</td>
</tr>
<tr>
<td>grass</td>
<td>should marijuana be made legal</td>
</tr>
<tr>
<td>grpother</td>
<td>r belongs to another voluntary association</td>
</tr>
<tr>
<td>grpparty</td>
<td>r belongs to a political party</td>
</tr>
<tr>
<td>grprelig</td>
<td>r belongs to a church or othr religious organization</td>
</tr>
<tr>
<td>grpsprts</td>
<td>r belongs to a sports, leisure, or cultural grp</td>
</tr>
</tbody>
</table>
grpwork r belongs to a trade union or professional association
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 relationship 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 help 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 themselves
helphwrk helped someone with homework 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 get the job done
htall healthcare provided for everyone
htldays days of activity limitation past 30 days
homosexual sexual relations
hospop 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
immrighnts 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
intlwhits 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
kiddsos rs kids living standard compared to r
knowsched 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
natcity  solving problems of big cities
natcityy assistance to big cities – version y
natcrime  halting rising crime rate
natcrimy law enforcement – version y
natdrug  dealing with drug addiction
natdrugy drug rehabilitation – version y
nateduc  improving nations education system
nateducy education – version y
natenergy  developing alternative energy sources
natenvir improving & protecting environment
natenviy the environment – version y
natfare  welfare
natfarey assistance to the poor – version y
nathospital improving & protecting nations health
nathaly 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
natspace space exploration program
natspacey 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
numemp number of employee for the self-employed
nummen 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 obey laws
opdevl 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
othreason how important to try to undrstand 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
pain10 fathers industry code (2010)
paocc10 fathers census occupation code (2010)
paborn 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
partners 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
pikupssex r had sex with casual date last year
pilok birth control to teenagers 14-16
pistol pistol or revolver in home
polabuse citizen said vulgar or obscene things
polactive 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
polmusrdr 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
popespsks 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
proudecxo 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
proudsct how proud its scientific and tech achievements
proudsppt 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
refrdmns 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
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>res16</td>
<td>type of place lived in when 16 yrs old</td>
</tr>
<tr>
<td>respect</td>
<td>r treated with respect at work</td>
</tr>
<tr>
<td>resnum</td>
<td>number in family of r</td>
</tr>
<tr>
<td>retchine</td>
<td>r returned money after getting too much change</td>
</tr>
<tr>
<td>revmeet</td>
<td>allowed to hold pub meeting for ppl who want overtho</td>
</tr>
<tr>
<td>rightmin</td>
<td>how important:govt protect right of minorities</td>
</tr>
<tr>
<td>richwork</td>
<td>if rich, continue or stop working</td>
</tr>
<tr>
<td>rifle</td>
<td>rifle in home</td>
</tr>
<tr>
<td>rincblls</td>
<td>income alone is enough</td>
</tr>
<tr>
<td>rincom06</td>
<td>respondents income</td>
</tr>
<tr>
<td>rincome</td>
<td>respondents income</td>
</tr>
<tr>
<td>rowngun</td>
<td>does gun belong to r</td>
</tr>
<tr>
<td>safefrst</td>
<td>no shortcuts on worker safety</td>
</tr>
<tr>
<td>safehlt</td>
<td>safety and health condition good at work</td>
</tr>
<tr>
<td>safetywk</td>
<td>worker safety priority at work</td>
</tr>
<tr>
<td>satfin</td>
<td>satisfaction with financial situation</td>
</tr>
<tr>
<td>satjob</td>
<td>job or housework</td>
</tr>
<tr>
<td>satjob1</td>
<td>job satisfaction in general</td>
</tr>
<tr>
<td>savesoul</td>
<td>tried to convince others to accept jesus</td>
</tr>
<tr>
<td>sciinfits</td>
<td>benefits of sci research outweight harmful results</td>
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<tr>
<td>scirom</td>
<td>main source of information about science and technology</td>
</tr>
<tr>
<td>scinews1</td>
<td>newspaper printed or online</td>
</tr>
<tr>
<td>scinews2</td>
<td>magazine printed or online</td>
</tr>
<tr>
<td>scinews3</td>
<td>where online get info</td>
</tr>
<tr>
<td>scistudy</td>
<td>r has clear understanding of scientific study</td>
</tr>
<tr>
<td>scitext</td>
<td>what it means to r to study scientifically</td>
</tr>
<tr>
<td>secondwk</td>
<td>r has job other than main</td>
</tr>
<tr>
<td>sector</td>
<td>type of college respondent attended</td>
</tr>
<tr>
<td>seeksci</td>
<td>probable source of information about scientific issues</td>
</tr>
<tr>
<td>selffrst</td>
<td>people need not overly worry about others</td>
</tr>
<tr>
<td>selfless</td>
<td>r feels like a selfless caring for others</td>
</tr>
<tr>
<td>servepeo</td>
<td>how committed govt administrators are to serve people</td>
</tr>
<tr>
<td>sexeduc</td>
<td>sex education in public schools</td>
</tr>
<tr>
<td>sexfreq</td>
<td>frequency of sex during last year</td>
</tr>
<tr>
<td>sexornt</td>
<td>sexual orientation</td>
</tr>
<tr>
<td>sexsex</td>
<td>sex of sex partners in last year</td>
</tr>
<tr>
<td>sexsex5</td>
<td>sex of sex partners last five years</td>
</tr>
<tr>
<td>shortcom</td>
<td>world better if america acknowledged shortcomings</td>
</tr>
<tr>
<td>shotgun</td>
<td>shotgun in home</td>
</tr>
<tr>
<td>sibs</td>
<td>number of brothers and sisters</td>
</tr>
<tr>
<td>signpet</td>
<td>signed a petition</td>
</tr>
<tr>
<td>size</td>
<td>size of place in 1000s</td>
</tr>
<tr>
<td>slpprblm</td>
<td>trouble sleeping last 12 months</td>
</tr>
<tr>
<td>socbar</td>
<td>spend evening at bar</td>
</tr>
<tr>
<td>socfrend</td>
<td>spend evening with friends</td>
</tr>
<tr>
<td>soccommun</td>
<td>spend evening with neighbor</td>
</tr>
<tr>
<td>socrel</td>
<td>spend evening with relatives</td>
</tr>
<tr>
<td>solarrev</td>
<td>sci knowledge:how long the earth goes around the sun</td>
</tr>
</tbody>
</table>
solok  how important: citizens have adequate standard of living
spanking  favor spanking to discipline child
spden  specific denomination, spouse
spdpdged  spouse diploma, ged, or other
spvwork  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
spkmisl  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
spvtfair  supervisor is fair
spwkslf  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
strdpdpg  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
suprsbjb  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
tens  household members 13 thru 17 yrs old
teensex  sex before marriage – teens 14-16
thnkself  to think for oneself
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
wkhrarsex 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

### 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

```r
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

```r
data <- mtcars
hst(data, mpg, cyl)
```

---

**mode**

Mode Function

Description

This function returns the mode for a given data frame.

Usage

```r
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

```r
data <- mtcars
mode(data$mpg)
```

---

**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**

```r
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**

```r
data <- mtcars
```

```r
ow.anova(data, mpg, cyl, plot=TRUE)
```
### 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**

```r
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**

```r
data <- mtcars
p.corr(data, mpg, wt)
```

---

### 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**

```r
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 \( \text{var1} \) should be parsed.
- **by2**: a potential second independent/predictor variable, \( X_2 \). A second grouping variable by which the Q-Q plot for \( \text{var1} \) (already parsed by \( \text{by1} \)) should be parsed.

**Value**

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

**Examples**

```r
data <- mtcars
qq(data, mpg, cyl)
```

---

**Description**

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

**Usage**

```r
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 \( Y \sim X_1 + X_2 \... \)

**Examples**

```r
data <- mtcars
residplot(data, mpg ~ wt + am)
```
**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)
```

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

**Examples**
```r
data <- mtcars
scatter(data, mpg, wt)
```

**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)
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