Package ‘PrettyR’

March 22, 2020

Title Functions to make pretty graphs and tables.

Version 0.1.4

Date 2020-03-22

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Description

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URL <https://github.com/Jadamso/PrettyR>

Encoding UTF-8

LazyData true

Published 2020-03-22

Roxygen list(markdown = TRUE)

Imports utils,
stargazer

RoxygenNote 7.1.0

R topics documented:

`add_legend` *Add legend to outer margins*

Description

Add legend to outer margins

Usage

```
add_legend(...)
```

Arguments

`...`	passed to legend

Value

legend on outer margins

`bin_mode` *Take the Mode of Data after Binning*

Description

Take the Mode of Data after Binning

Usage

```
bin_mode(x, breaks = "Sturges")
```

Arguments

`x`	a numeric vector
`breaks`	see hist

Value

scalar

Examples

```
bin_mode(runif(100))
```

`CI_lu` *Custom confidence intervals*

Description

Custom confidence intervals

Usage

```
CI_lu(Pred = NULL, CI = NULL, Fit = NULL, SE = NULL, level = 0.95, degf = Inf)
```

Arguments

`Pred`	predict(reg, se.fit = TRUE) object
`CI`	Compute CI From Regression Prediction Object
`Fit`	Compute Yhat From Regression Prediction Object
`SE`	Compute Standard errors
`level`	confidence level
`deg`	degrees of freedom in t-distribution

Details

Should first try predict(reg, interval = 'confidence', level=level) note deg=inf coef estimates are approx normally distributed

Value

data frame of upper and lower confidence bounds

`loess_list` *Run Multiple Loess for Spaghetti Plot*

Description

Run Multiple Loess for Spaghetti Plot

Usage

```
loess_list(form, splitDF, spag_idname, split = FALSE, parallel = TRUE, ...)
```

Arguments

`form`	regression formula
`splitDF`	dataframe to regress on
`spag_idname`	split data frame by this id
`split`	split up splitDF into list of dataframes?
`parallel`	use multiple cores
`...`	arguments passed to loess

Value

list of loess outputs

`matJ` *Convert Matrix for stargazerJ*

Description

Convert Matrix for stargazerJ

Usage

```
matJ(
  Xmat,
  Xrows = (1:nrow(Xmat))[1:nrow(Xmat)%%2 == 0],
  Xcols = 1:ncol(Xmat),
  Xrd = 0,
  Xfm = NULL
)
```

Arguments

Xmat	a matrix of summary regression information
Xrows	which rows to add braces to
Xcols	which columns to add braces to
Xrd	how many digits to round
Xfm	formatC format

Value

datatable

`mfx` *Formatting*

Description

Formatting

Usage

```
mfx(
  MFXall,
  trimnames = "PCrast5",
  varnames = c("HHI", "HHI^2"),
  cnames = c("ACLED", "UCDP"),
  ROOT = TRUE,
  nvar = 3,
  colrep = 2
)
```

Arguments

`nvar`	number of variables of interest
`colrep`	

Value

datatable

`mfxi.lm` *Run a Regression*

Description

Run a Regression

Usage

```
mfxi.lm(formi, datai, vcv = "standard")
```

Arguments

`formi`	regression formula
`datai`	data for regression
`vcv`	type of covariance correction

Value

summary table

`mfxlist2vec` *Table Formatting*

Description

Table Formatting

Usage

```
mfxlist2vec(trimlist, nvar = 3)
```

Arguments

`trimlist`	object from mfxtrim
`nvar`	number of variables of interest

Value

list of formatted summary tables

`mfxtrim` *Table Summarizing*

Description

Table Summarizing

Usage

```
mfxtrim(testlist, rnames, stat = "Std. Error")
```

Arguments

`testlist`	list of lmtest::coeftest objects
`stat`	which statistic to retrieve
`varnames`	names of variable names

Value

list of summary tables

`mypal` *My Color Palette*

Description

My Color Palette

Usage

```
mypal(n)
```

Arguments

`n`	integer number of colors

polygon_add *Polygon Plot*

Description

Polygon Plot

Usage

```
polygon_add(X, ci_lu, col = rgb(0, 0, 0, 0.25), bcol = NA)

polygon_format(X, ci_lu)
```

Arguments

`X`	X matrix from polygon_ci
`ci_lu`	matrix from polygon_ci
`col, bcol`	color objects

Value

plots polygon

polygon_ci *Polygon Plot*

Description

Polygon Plot

Usage

```
polygon_ci(reg, xname, ...)
```

Arguments

`reg`	output from lm() or loess()
`xname`	name of RHS of regression formula
`...`	passed to predict()
`level`	confidence levels

Value

list with matrix of lower,upper confidence intervals and X variable

polygon_plot *Plot the polygon*

Description

Plot the polygon

Usage

```
polygon_plot(
  reg,
  xname,
  xlb = "X",
  ylb = "Y",
  xlm = NULL,
  ylm = NULL,
  ttl = NULL,
  off = FALSE,
  ...
)
```

Arguments

reg	lm object
xname	name of xvariable of interest
level	confidence interval range

Value

plots polygon

root *Formatting Inputs to Unit Root*

Description

Formatting Inputs to Unit Root

Usage

```
root(MFX, mfxn1 = "HHI", mfxn2 = "HHI^2", min0 = 0, max1 = 1)
```

Arguments

MFX	matrix of coefficients
mfxn1, mfxn2	variable names (rows)
min0	minimum of possible values
max1	maximum of possible values

Details

each column of MFX should provide a different set of estimates

Value

datatable

---

scatboot *M out of N Bootstrapped Loess Confidence Intervals*

Description

M out of N Bootstrapped Loess Confidence Intervals

Usage

```
scatboot(
  x,
  y,
  breps = 100,
  mfun = function(m) {     m^(0.9) },
  confidence = 0.9,
  family = "gaussian",
  degree = 2,
  span = 2/3
)
```

Arguments

`x, y`	coordinates
`breps`	number of bootstrap replications
`mfun`	function to define m out of n subsample
`confidence`	CI interval
`degree, span, family`	loess parameters

Details

see "http://content.csbs.utah.edu/~rogers/datanal/R/scatboot.r"

Value

list of loess outputs

scatter_gram *Scatter Plot with Histograms*

Description

Scatter Plot with Histograms

Scatter Plot with Histograms

Usage

```
scatter_gram(
  X,
  Y,
  XBINS = NULL,
  xbin_scale = function(x) {     x * 2 + 0.5 },
  xbks = "Sturges",
  ybks = "Sturges",
  col = rgb(0, 0, 0, 0.5),
  xlb = "X",
  ylb = "Y",
  xrange = NA,
  yrange = NA,
  ttl = NULL
)

scatter_gram2(
  X,
  Y,
  XBINS = NULL,
  xbin_scale = function(x) {     x * 2 + 0.5 },
  xbks = "Sturges",
  ybks = "Sturges",
  col = rgb(0, 0, 0, 0.5),
  xlb = "X",
  ylb = "Y",
  expr = "",
  xrange = NA,
  yrange = NA,
  xm = NULL,
  ym = NULL,
  cexm = 0.2,
  ttl = NULL
)
```

Arguments

X	vector of values
Y	vector of values
XBINS	bin the X,Y for plotting
xbin_scale	how to scale XBINS

`xbks, ybks`	how to make histograms
`col`	color of the plot
`xlb, ylb`	axis lables
`ttl`	plot title

Value

plots polygon

See Also

scatter_gram2

Examples

```
scatter_gram(1:100, runif(100))
```

`spaghetti_lines` *Plot Spaghetti Lines*

Description

Plot Spaghetti Lines

Usage

```
spaghetti_lines(YList, Xlist, plot_col = "#00000080", lwd = 0.5, ...)
```

Arguments

`YList, Xlist`	output from PrettyR::spag_loess
`plot_col`	col in lines()
`lwd, ...`	passed to lines()

Details

a loess line for each list element

Value

nothing

spaghetti_mean *Plot Average of Spaghetti Lines*

Description

Plot Average of Spaghetti Lines

Usage

```
spaghetti_mean(YList, Xlist, plot_col = 1, lwd = 2, ...)
```

Arguments

`YList, Xlist`	output from PrettyR::spag_loess
`plot_col, lwd`	passed to lines()
`...`	passed to lines()

spaghetti_plot *Spaghetti Plot, a loess line for each list element*

Description

Spaghetti Plot, a loess line for each list element

Usage

```
spaghetti_plot(
  LoList,
  pdfname,
  xlb = "X",
  ylb = "Y",
  ttl = NULL,
  xln = 3,
  yln = 3,
  xlm = NULL,
  ylm = NULL,
  plot_col = rgb(0, 0, 0, 0.5),
  meanline = FALSE,
  ...
)
```

Arguments

`LoList`	output from PrettyR::spag_loess
`pdfname`	full name of pdf
`xlb, ylb, ttl`	axis names
`xln, yln`	axis lines
`xlm, ylm`	axis limits

`plot_col`	color of spaghetti lines
`meanline`	draw the mean of the spaghettis
`...`	passed to spaghetti_lines

Details

seealso http://www.ats.ucla.edu/stat/r/faq/spagplot.htm

`stargazerJ` *Table Formatting*

Description

Table Formatting

Usage

```
stargazerJ(
  Xmat,
  ...,
  new.align = NULL,
  new.title = NULL,
  new.metatitle = NULL,
  new.tail = NULL,
  tab.out = NULL,
  new.notes = NULL,
  pb.tw = 1,
  new.omit = NULL,
  out = NULL,
  column.sep.width = "0pt",
  new.digits = 2,
  new.digits.extra = 5,
  new.table.placement = "H",
  new.other = TRUE,
  new.parbox = NULL
)
```

Arguments

`Xmat`	object from matJ
`out`	NULL
`new.parbox`	

Details

See also matJ

Value

datatable

Examples

```
MATRIX <- data.frame( diag(4) )
NOTES <- paste0("NOTE", LETTERS, collapse=" ")
new.align <- "l cc @{\\\\hspace{18pt}} cc"
TITLE <- paste0( "& \\\\multicolumn{2}{c}{MEOW}",
   "&\\\\multicolumn{2}{c}{MIX}  \\\\\\\\",
   "& Estimate & SE & Estimate & SE")
C3     <- paste0( " Controls &", " G$\&$P & & G$\&$P & ", " \\\\ ")
C4     <- paste0( " F.E. &", " C$\&$T & & C$\&$T & ", " \\\\ ")

stargazerJ( MATRIX,
   title="Meow Mix Table",
   label="tab:meowmix",
   column.sep.width="-4pt",
   new.notes=NOTES,
   pb.tw=.7,
   new.tail=c(C3, C4),
   new.title=TITLE,
   new.align=new.align)
```

`stargazerJlist` *Table Formatting for Lists*

Description

Table Formatting for Lists

Usage

```
stargazerJlist(
  Xlist,
  ...,
  new.align = NULL,
  new.title = NULL,
  new.metatitle = NULL,
  new.tail = NULL,
  tab.out = NULL,
  new.notes = NULL,
  pb.tw = 1,
  new.omit = NULL,
  out = NULL,
  column.sep.width = "0pt",
  new.digits = 2,
  new.digits.extra = 5,
  new.table.placement = "H",
  new.other = TRUE,
  new.parbox = NULL
)
```

Details

different handling in part ## Xmat and Table dimensions

`Ttest2` *Welchs t-test*

Description

Welchs t-test

Welchs t-test, variant3

Usage

```
Ttest2(m1, m2, s1, s2, n1, n2, side = 2, m0 = 0)

Ttest3(m1, m2, s1, s2, n1, n2, m0 = 0, equal.variance = FALSE)
```

Arguments

`m1, m2`	the sample means
`s1, s2`	the sample standard errors
`n1, n2`	the sample sizes
`side`	upper, lower, or 2sided
`m0`	the null value for the difference in means to be tested for. Default is 0.

Value

a summary of the T-test

Examples

```
n1 <- 100
x1 <- 1:n1
y1 <- 3*x1+ rnorm(n1, 0, 50)
lm1 <- summary( lm( y1~x1) )
coefs1 <- coef(lm1)[2,1:2]
n2 <- 200
x2 <- 1:n2
y2 <- 2*x2 + rnorm(n2, 0, 50)
lm2 <- summary( lm( y2~x2) )
coefs2 <- coef(lm2)[2,1:2]
Ttest2( coefs1[1], coefs2[1], coefs1[2], coefs2[2], n1, n2  )
```

UROOT *Formatting Inputs to Unit Root*

Description

Formatting Inputs to Unit Root

Usage

```
UROOT(x, b1, b2, ...)
```

Arguments

`x`	sequence
`b1, b2`	coefficients

Value

a vector

Wstat *Welchs T-test for a Y variable calculated from a window on each side of x0*

Description

Welchs T-test for a Y variable calculated from a window on each side of x0

Usage

```
Wstat(wind, dframe, x0, yvar, xvar, corr = 0, ...)
```

Arguments

`wind`	fraction (percent of data to include)
`dframe`	data to cut
`x0`	
`xvar`	

Value

list of loess outputs

Index