Package 'helpeRs'

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Title Helper functions for high-quality presentation of quantitative research

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Description Helper functions for high-quality presentation of quantitative research.

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Contents

`cols2numeric` *Convert data frame columns to numeric when possible*

Description

Attempts to coerce each column to numeric; non-convertible columns are left unchanged.

Usage

```
cols2numeric(x)
```

Arguments

`x`	A data frame.

Value

A data frame with the same shape as `x`.

Examples

```
## Not run: cols2numeric(data.frame(a = c("1","2"), b = letters[1:2]))
```

`colSummmary` *Summarise each column of a data frame*

Description

Numeric columns are replaced by their mean while non-numeric columns are replaced by their mode.

Usage

```
colSummmary(x)
```

Arguments

`x`	A data frame.

Value

A vector of summary values with one entry per column of `x`.

Examples

```
## Not run: colSummmary(data.frame(a = 1:3, b = letters[1:3]))
```

f2n *Convert factors to numeric*

Description

Converts input to character and then to numeric.

Usage

```
f2n(x)
```

Arguments

x	Vector to convert.

Value

Numeric vector.

Examples

```
## Not run: f2n(factor(c("1","2")))
```

fixZeroEndings *Ensure numbers have a fixed number of decimal places*

Description

Pads numeric strings with trailing zeros to enforce a fixed number of decimal places.

Usage

```
fixZeroEndings(zr, roundAt = 2)
```

Arguments

zr	A character or numeric vector.
roundAt	Desired number of decimal places.

Value

Character vector with padded values.

Examples

```
fixZeroEndings(c("1", "1.2"), roundAt = 2)
```

FullTransformer *Clean and reorder regression tables*

Description

Performs string replacements and reordering so the table is suitable for LaTeX.

Usage

```
FullTransformer(t_FULL, COLNAMES_VEC)
```

Arguments

t_FULL	Matrix or data frame containing the raw table.
COLNAMES_VEC	Character vector of column names to apply.

Value

A transformed data frame.

Examples

```
## Not run: FullTransformer(my_table, c("A","B"))
```

GetTableEntry *Extract regression results as a table row*

Description

Builds a table row summarising a fitted model with clustered or bootstrap standard errors.

Usage

```
GetTableEntry(my_lm, clust_id, iv_round = 2, NAME = "", iv = FALSE,
              inParens = "tstat", seType = "analytical",
              bootDataLocation = "./", bootDataNameTag = "Data",
              bootFactorVars = NULL, bootExcludeCovars = NULL,
              superunit_covariateName = "country",
              superunit_label = "Countries")
```

Arguments

my_lm	A fitted model object.
clust_id	Optional clustering variable name.
iv_round	Number of digits to round.
NAME	Column name for the returned row.
iv	Logical; set to TRUE for IV models.
inParens	"tstat" or "se".

seType	"analytical" or "boot".
bootDataLocation	Folder containing bootstrap data.
bootDataNameTag	Prefix of bootstrap files.
bootFactorVars	Factor variables to treat as factors when bootstrapping.
bootExcludeCovars	Variables to exclude when bootstrapping.
superunit_covariateName	Grouping variable for super-units.
superunit_label	Label for the super-unit count.

Value

A one-row data frame with formatted coefficients and metadata.

Examples

```
## Not run: GetTableEntry(lm(y~x,data), NULL)
```

---

heatMap *Interpolate scattered data and draw a heat map*

Description

Create an interpolated heat map of irregularly spaced data.

Usage

```
heatMap(x, y, z, main = "", N, yaxt = NULL, xlab = "",
        ylab = "", horizontal = FALSE, useLog = "",
        legend.width = 1, ylim = NULL, xlim = NULL, zlim = NULL,
        add.legend = TRUE, legend.only = FALSE, vline = NULL,
        col_vline = "black", hline = NULL, col_hline = "black",
        cex.lab = 2, cex.main = 2, myCol = NULL,
        includeMarginals = FALSE, marginalJitterSD_x = 0.01,
        marginalJitterSD_y = 0.01, openBrowser = FALSE)
```

Arguments

x, y, z	Numeric vectors of coordinates and values.
main	Plot title.
N	Number of grid cells per dimension.
yaxt	Optional y axis labels.
xlab, ylab	Axis labels.
horizontal	Logical; draw legend horizontally.
useLog	Axes to log-transform.

legend.width	Width of the colour legend.
ylim, xlim, zlim	Plot limits.
add.legend	Logical; draw the legend.
legend.only	Logical; draw only the legend.
vline, hline	Reference lines.
col_vline, col_hline	Colours for reference lines.
cex.lab, cex.main	Character expansion for labels and title.
myCol	Optional colour palette.
includeMarginals	Add marginal rugs if TRUE.
marginalJitterSD_x, marginalJitterSD_y	Jitter scales for rugs.
openBrowser	Logical; enter browser() for debugging.

Value

Invisibly returns NULL.

Examples

```
## Not run: heatMap(rnorm(10), rnorm(10), rnorm(10), N = 25)
```

---

image2 *Plot a matrix as an image with optional axis labels*

Description

Plot a matrix with the first row at the top and optional axis labels.

Usage

```
image2(mat, xaxt = NULL, yaxt = NULL, col = NULL, main = NULL,
       scale_vec = c(1, 1.04), cex.axis = 1)
```

Arguments

mat	Matrix to display.
xaxt, yaxt	Optional character vectors of axis labels.
col	Colour palette passed to image.
main	Optional title.
scale_vec	Numeric vector controlling axis tick placement.
cex.axis	Character expansion for axis tick labels.

Value

Invisibly returns NULL.

Examples

```
## Not run:
image2(matrix(1:4, 2))

## End(Not run)
```

`MakeHeatMap` *Visualise a two-way predictor effect as a heat map*

Description

Create a grid over two predictors, predict the outcome and draw a heat map.

Usage

```
MakeHeatMap(factor1, factor2, outcome, dat, lm_obj, pdf_path,
            extrap_factor1 = 1, extrap_factor2 = 1, useLog = "",
            OUTCOME_SCALER = 1, OutcomeTransformFxn = function(x) x,
            openBrowser = FALSE)
```

Arguments

`factor1`, `factor2`	Names of the predictor variables to vary.
`outcome`	Outcome variable name.
`dat`	Data frame used to fit the model.
`lm_obj`	Fitted linear model.
`pdf_path`	File path for the PDF output.
`extrap_factor1`, `extrap_factor2`	Factors controlling extrapolation range.
`useLog`	Axes to log-transform.
`OUTCOME_SCALER`	Scaling factor applied to predictions.
`OutcomeTransformFxn`	Function applied to predictions before plotting.
`openBrowser`	Enter `browser()` if TRUE.

Value

Invisibly returns `NULL`. A PDF is written to `pdf_path`.

Examples

```
## Not run: MakeHeatMap("x","y","z", dat, lm(z~x+y, dat), "out.pdf")
```

Stargazer2FullTable *Convert a stargazer table to a self-contained longtable*

Description

Converts `stargazer` output to a `longtable` environment.

Usage

```
Stargazer2FullTable(stargazer_text, fontsize = "footnotesize")
```

Arguments

`stargazer_text`	Character vector of raw lines produced by `stargazer()`.
`fontsize`	LaTeX font size environment to wrap the table in.
`continued_note`	Logical indicating whether to print the continued banner.

Value

A character vector ready to be written to a `.tex` file.

Examples

```
## Not run: tex <- Stargazer2FullTable(txt)
```

Tables2Tex *Generate publication-ready regression tables*

Description

Collates regression results and writes LaTeX tables using `stargazer`.

Usage

```
Tables2Tex(reg_list, clust_id, seType = "analytical",
           checkmark_list = NULL, addrow_list = NULL,
           saveFolder = "./", nameTag = "Table", saveFull = TRUE,
           tabCaption = "", model.names = NULL, NameConversionMat = NULL,
           DoFullTableKey = TRUE, superunit_covariateName = "country",
           superunit_label = "Countries", font.size = "footnotesize",
           inParens = "tstat", font.size.full = "footnotesize")
```

Arguments

reg_list	List of fitted models or character strings.
clust_id	Clustering variable name.
seType	Type of standard errors.
checkmark_list	Optional list of binary indicators.
addrow_list	Optional named list of additional rows.
saveFolder	Directory for output files.
nameTag	Base name for files.
saveFull	Produce the full table as well.
tabCaption	Caption for the condensed table.
model.names	Column headings for models.
NameConversionMat	Two-column matrix for renaming rows.
DoFullTableKey	Mention the full table in the caption.
superunit_covariateName	Variable used to count higher level units.
superunit_label	Label for that count.
font.size	Font size for the short table.
inParens	"tstat" or "se" for entries in parentheses.
font.size.full	Font size for the full table.

Value

Invisibly returns NULL. Files are written to disk.

Examples

```
## Not run: Tables2Tex(list(lm(y~x,data)), NULL)
```

---

vcovCluster *Cluster-robust covariance matrix estimator*

Description

Computes a clustered sandwich covariance matrix for a fitted model.

Usage

```
vcovCluster(fm, clvar)
```

Arguments

fm	A fitted model object.
clvar	Name of the clustering variable.

Value

A covariance matrix.

Examples

```
## Not run: vcovCluster(lm(y~x,data), "group")
```

`WidenMargins` *Wrap a LaTeX table in an adjustwidth environment*

Description

Adds an `adjustwidth` environment around a table to slightly widen the margins.

Usage

```
WidenMargins(x)
```

Arguments

`x`	Character vector containing the LaTeX table.

Value

Modified character vector.

Examples

```
## Not run: WidenMargins(readLines("table.tex"))
```

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