Package 'regr.easy'

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Type Package

Title Easy Linear, Quadratic and Cubic Regression Models

Version 1.0.2

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Description Focused on linear, quadratic and cubic regression models, it has a function for calculating the models, obtaining a list with their parameters, and a function for making the graphs for the respective models.

License GPL-3

Encoding UTF-8

RoxygenNote 7.2.1

Imports ggplot2, stargazer

NeedsCompilation no

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R topics documented:

`regr_easy_calc` *Calculation of Regression Models: Linear, Quadratic and Cubic.*

Description

Performs regression calculations: linear, quadratic and cubic, allowing to perform only one or both, returning a detailed result of the calculation

Usage

```
regr_easy_calc(x, y, model = "all")
```

Arguments

x	Values that should be used as an independent variable for the regression calculation.
y	Values that should be used as a dependent variable for the regression calculation.
model	Character, defined which model will be calculated. model = "L", calculate the linear, model = "Q" calculate the quadratic, model = "C" calculate the cubic, model = "all" = calculate both).

Value

returns a list with the regression result (linear, quadratic and/or cube)

Examples

```
library(regr.easy)
x <- seq(0,300,50)
y <- c(138.6,153.6,164.525,164.925,158.725,159.975,154.425)
regr_easy_calc(x,y,model = "all")
```

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regr_easy_graf *Regression Model Graphs: Linear, Quadratic and Cubic.*

Description

It makes graphs for the regression models: linear, quadratic and cubic, allowing the plotting of the R-square, the equation, and other aspects related to regression.

Usage

```
regr_easy_graf(
  x,
  y,
  model = "L",
  plot_eq = TRUE,
  plot_R2 = TRUE,
  plot_res = TRUE,
  title = "",
  subtitle = "",
  title_x = "x",
  title_y = "y",
  pch = 21,
  pch_size = 2.5,
  pch_fill = "black",
```

```
  pch_colour = "black",
  point_max = FALSE,
  equ_pos = NULL,
  R2_pos = NULL,
  l_type = 1,
  l_color = "red",
  col_resid = "red",
  ax_size = 12,
  ax_title_size = 12,
  equ_tex_size = 12,
  pch_max = 4,
  pmax_size = 2.5,
  pmax_fill = "red",
  pmax_col = "red",
  lmax_type = 2,
  lmax_col = "red",
  lmax_size = 0.5,
  lmax_alpha = 1
)
```

Arguments

x	Values that should be used as an independent variable for the regression calculation.
y	Values that should be used as a dependent variable for the regression calculation.
model	Character, defined which model will be calculated. model = "L", calculate the linear, model = "Q" calculate the quadratic, model = "C" calculate the cubic, model = "all" = calculate both). Default "L".
plot_eq	Logical, if TRUE (default) plots the regression equation on the graph.
plot_R2	Logical, if TRUE (default) plots the regression R-square on the graph.
plot_res	Logical, if true (default), it plots segments referring to the residuals in the graph.
title	Character, title of the graph.
subtitle	Character, subtitle of the graph.
title_x	Character, x axis label in plot.
title_y	Character, y axis label in plot.
pch	y and x plot symbol. Default = 21.
pch_size, pch_fill, pch_colour	Size, padding and contour of points (pch) of y and x. Defaults = 2.5, "black", "black").
point_max	Logical, if TRUE, the value corresponding to the maximum value will be added to the graph. Valid only for model="Q". Default = FALSE.
equ_pos	A vector of 2 values to position the equation on the graph, if NULL will be plotted at a predefined position.
R2_pos	A vector of 2 values to position the R-square on the graph, if NULL will be plotted at a predefined position.

`l_type, l_color`
: Line type e color to use in the regression equation curve. Defaults = 1,"red".

`col_resid`
: Color to be used in the residuals of the regression equation. Default = "red.

`ax_size`
: Size for axis marking labels. Default = 12.

`ax_title_size`
: Size for axis titles. Defaults = 12,12.

`equ_tex_size`
: Size for the regression equation e R-square. Default = 12.

`pch_max`
: Symbol of the maximum value of the quadratic regression model. Default = 4.

`pmax_size, pmax_fill, pmax_col`
: Size, padding and outline of the maximum value symbol of the quadratic regression model. Defaults = 2.5, "red, "red.

`lmax_type, lmax_col, lmax_size, lmax_alpha`
: Type, color, size and transparency of the maximum value line of the quadratic regression model. Defaults = 2, "red", 0.5, 1.

Value

Returns a ggplot2 for the defined regression model.

Examples

```
library(regr.easy)
x <- seq(0,300,50)
y <- c(138.6,153.6,164.525,164.925,158.725,159.975,154.425)
regr_easy_graf(x,y, model = "Q")
```

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