Package ‘regr.easy’

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.
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Imports ggplot2, stargazer
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Description

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

```r
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

```r
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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**regre easy graf**  

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

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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

```r
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", 
)```
regr_easy_graf

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 and 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 and 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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