Package ‘plotMElm’

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Type Package

Title Plot Marginal Effects from Linear Models

Description Plot marginal effects for interactions estimated from linear models.

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BugReports https://github.com/christophergandrud/plotMElm/issues

License GPL (>= 3)

Imports ggplot2, interactionTest

LazyData TRUE

RoxygenNote 6.0.1

NeedsCompilation no

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plot_me

Plot marginal effects from two-way interactions in linear regressions

Description

Plot marginal effects from two-way interactions in linear regressions

Usage

plot_me(obj, term1, term2, fitted2, ci = 95, ci_type = "standard", t_statistic, plot = TRUE)

Arguments

obj fitted model object from lm.
term1 character string of the first constitutive term of the interaction’s variable name.
term2 character string of the second constitutive term of the interaction’s variable name.
fitted2 numeric vector of fitted values of term2 to plot for. If unspecified, then all unique observed values are used.
cli numeric. confidence interval level, expressed on the ]0, 100[ interval. The default is 95.
ci_type character string specifying the type of confidence interval to find and plot. If 'standard' then standard confidence intervals (e.g. those suggested by Brambor, Clark, and Golder 2006) are found. If fdr then confidence intervals are found using critical t-statistics to limit the false discovery rate (limit over confidence).
t_statistic numeric. Custom t-statistic for finding the confidence interval. May be useful if the user want to use a function like findmultilims to find the t-statistic.
plot boolean. return plot if TRUE; return data.frame of marginal effects estimates if FALSE.

Value

a gg class ggplot2 object

Source


Examples

```r
## Continuous Term1 and Term2
# Estimate model
states <- as.data.frame(state.x77)
m1 <- lm(Murder ~ Income * Population, data = states)

# Plot marginal effect of Income across the observed range of Population
# on the Murder rate
plot_me(m1, 'Income', 'Population', ci = 95)

# CI created using false discovery rate limiting t-statistic
plot_me(m1, 'Income', 'Population', ci_type = 'fdr')

# Return marginal effects as a data frame
plot_me(m1, 'Income', 'Population', plot = FALSE)

## Term 2 with <= 5 unique values
# Estimate model
m2 <- lm(mpg ~ wt * cyl, data = mtcars)

# Plot marginal effect of Weight across the Number of Cylinders (continuous)
plot_me(m2, 'wt', 'cyl')

## Categorical (factor) Term2
# Set Term 2 as a factor variable
mtcars$cyl <- factor(mtcars$cyl,
  labels = c('4 Cyl', '6 Cyl', '8 Cyl'))

# Estimate model
m3 <- lm(mpg ~ wt * cyl, data = mtcars)

# Plot marginal effect of Weight across the Number of Cylinders (factor)
plot_me(m3, 'wt', 'cyl')
```
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