Package

January 28, 2019

Title Package to create interactive Ceteris Paribus plots

Version 0.0.1

Description
> Package to create interactive Ceteris Paribus plots based on ceterisParibus package using D3.

Depends R (>= 3.4.4), htmlwidgets

Suggests randomForest, ceterisParibus

Imports ceterisParibus

License GPL-2

Encoding UTF-8

LazyData true

URL https://github.com/flaminka/ceterisParibusD3

BugReports https://github.com/flaminka/ceterisParibusD3/issues

RoxygenNote 6.1.1

R topics documented:

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ceterisParibusD3	*Create interactive D3-based Ceteris Paribus Explanations Plots*

Description

> Function 'ceterisParibusD3' plots interactive version of Ceteris Paribus Plots available in ceterisParibus package. Various parameters help to decide what (profiles, aggregated profiles, points or rugs) and how it should be plotted.

Usage

```
ceterisParibusD3(model, ..., selected_variables = NULL, color = NULL,
  width = NULL, height = NULL, no_colors = NULL,
  categorical_order = NULL, size_rugs = NULL, alpha_rugs = NULL,
  color_rugs = NULL, color_points = NULL, color_residuals = NULL,
  color_pdps = NULL, alpha_residuals = NULL, alpha_points = NULL,
  alpha_ices = NULL, alpha_pdps = NULL, size_points = NULL,
  size_residuals = NULL, size_ices = NULL, size_pdps = NULL,
  show_profiles = TRUE, show_observations = TRUE, show_rugs = NULL,
  show_residuals = NULL, aggregate_profiles = NULL,
  font_size_titles = NULL, font_size_legend = NULL,
  font_size_axes = NULL, font_size_tootlips = NULL,
  font_size_table = NULL, add_table = NULL,
  font_size_plot_title = NULL, plot_title = NULL, yaxis_title = NULL,
  legend_keys_size = NULL)
```

Arguments

`model`	a ceteris paribus explainer produced with function 'ceteris_paribus()' from ceterisParibus package
`...`	other explainers that shall be plotted together
`selected_variables`	if not NULL then only 'selected_variables' will be presented
`color`	a character. Either name of a color or name of a variable that should be used for coloring
`width`	a numeric. Width (in px) of the whole plot
`height`	a numeric. Heigth (in px) of the whole plot
`no_colors`	a numeric. Number of colors in legend for sequential scales
`categorical_order`	a list. List with order of values for categorical variables in form as follows: list(variableName = c('category1', 'category2'), variableName2 = c('category3', 'category4'))
`size_rugs`	a numeric. Size of rugs to be plotted
`alpha_rugs`	a numeric between 0 and 1. Opacity of rug lines
`color_rugs`	a character. Name of a color. If NULL elements are plotted according to 'color' arguments
`color_points`	a character. Name of a color. If NULL elements are plotted according to 'color' arguments
`color_residuals`	a character. Name of a color. If NULL elements are plotted according to 'color' arguments
`color_pdps`	a character. Name of a color. If NULL elements are plotted according to 'color' arguments
`alpha_residuals`	a numeric between 0 and 1. Opacity of residuals
`alpha_points`	a numeric between 0 and 1. Opacity of points
`alpha_ices`	a numeric between 0 and 1. Opacity of ICE lines

alpha_pdps	a numeric between 0 and 1. Opacity of PDP lines
size_points	a numeric. Size of points to be plotted
size_residuals	a numeric. Size of residuals (lines and points) to be plotted
size_ices	a numeric. Size of ICE lines to be plotted
size_pdps	a numeric. Size of PDP lines to be plotted
show_profiles	a logical. If TRUE then individual profiles will be plotted
show_observations	
	a logical. If TRUE then individual observations will be marked as points
show_rugs	a logical. If TRUE then individual observations will be marked as rugs
show_residuals	a logical. If TRUE then residuals will be plotted as a line ended with a point
aggregate_profiles	
	a character. Either 'mean' or 'median'. If not NULL then profiles will be aggregated according to chosen metric and the aggregate profiles will be plotted
font_size_titles	
	a numeric. Font size in px of subplots titles
font_size_legend	
	a numeric. Font size in px of texts in legend
font_size_axes	a numeric. Font size in px of texts on axes
font_size_tootlips	
	a numeric. Font size in px of texts in tooltip
font_size_table	
	a numeric. Font size in px of texts in table
add_table	a logical. If TRUE then table will be plotted, default is TRUE
font_size_plot_title	
	a numeric. Font size in px of plot main title
plot_title	a character. Main title of the plot
yaxis_title	a character. Vertical (y) axis title of the plot
legend_keys_size	
	a numeric. Size of legend keys in px

Value

a ceterisParibusD3 object

Examples

```
 ## Not run:
library("DALEX")
library("ceterisParibusD3")
library("ceterisParibus")
library("randomForest")
set.seed(59)


apartments_rf_model <- randomForest(m2.price ~ construction.year + surface + floor +
                                   no.rooms + district,
                                data = apartments)
```

```
explainer_rf <- explain(apartments_rf_model,
                        data = apartmentsTest[,2:6],
                        y = apartmentsTest$m2.price)

apartments_A <- apartmentsTest[958,]
cp_rf_A <- ceteris_paribus(explainer_rf, apartments_A, y = apartments_A$m2.price)

# plot in ceterisParibus package
plot(cp_rf_A, show_profiles = TRUE, show_observations = TRUE,
    selected_variables = c("surface","construction.year"))

# interactive version from ceterisParibusD3 package
ceterisParibusD3(cp_rf_A, show_profiles = TRUE, show_observations = TRUE,
                selected_variables = c("surface","construction.year"), add_table = FALSE)


## End(Not run)
```

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