R documentation

of 'DensityResponse.Rd'

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DensityResponse   *Plot Distribution of the Response Variable*

Description

This function creates plots the distribution of the response variable.

Usage

```
DensityResponse(Data, xlab = "", ylab = "", main = "", alpha = 0.2, binwidth = NULL, histFill =
```

Arguments

Data	A numeric vector.
xlab	Title of the x axis.
ylab	Title of the y axis.
main	Title of the plot.
alpha	Alpha for the fill color of the distribution.
binwidth	Width of the histogram bins.
histFill	Fill color of the histogram bars.
histCol	Color of the histogram lines.
densityFill	Fill color of the distribution.
TitleSize	Title font size.
TextSize	Text size.
XAxisSize	Size of the text on the X axis.
YAxisSize	Size of the text on the Y axis.
AngleLab	Angle of the labels in the X axis.
LegendPosition	Position of the legend.
TitleAxesSize	Font size of the axes lables.
tmar	Top margin size. Default values is 1.
bmar	Bottom margin size. Default values is 1.
rmar	Right margin size. Default values is 1.
lmar	Left margin size. Default values is 1.

Details

Additional ggplot2 layers can be added with "+".

Value

Returns a ggplot object.

Author(s)

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Examples

```
##---- Should be DIRECTLY executable !! ----
##-- ==>  Define data, use random,
##--or do  help(data=index)  for the standard data sets.

## The function is currently defined as
function (Data, xlab = "", ylab = "", main = "", alpha = 0.2,
    binwidth = NULL, histFill = "white", histCol = "black", densityFill = "#FF6666",
    TitleSize = 15, TextSize = 15, XAxisSize = 15, YAxisSize = 15,
    AngleLab = 30, LegendPosition = "right", TitleAxesSize = 15,
    tmar = 1, bmar = 1, rmar = 1, lmar = 1)
{
    if (!is.vector(Data))
        stop("Input data must be a numeric matrix or data.frame")
    Data <- data.frame(Values = Data)
    if (is.null(binwidth))
        binwidth <- abs(range(Data)[1] - range(Data)[2])/20
    p <- ggplot(Data, aes(x = Values)) + theme_bw() + geom_histogram(aes(y = ..density..),
        binwidth = binwidth, colour = histCol, fill = histFill) +
        geom_density(alpha = alpha, fill = densityFill) + ylab(ylab) +
        xlab(xlab) + ggtitle(main) + theme(text = element_text(size = TextSize),
        axis.text.x = element_text(size = XAxisSize, angle = AngleLab,
            hjust = 1), axis.title.x = element_text(size = TitleAxesSize),
        axis.title.y = element_text(size = TitleAxesSize), axis.text.y = element_text(size = YAxisSize),
        legend.position = LegendPosition, plot.title = element_text(size = TitleSize),
        legend.key = element_blank(), plot.margin = unit(c(tmar,
            rmar, bmar, lmar), "cm"))
    return(p)
  }
```

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