Package 'chartist'

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Title chartist.js in R

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Description Implements chartist.js in R.

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Encoding UTF-8

LazyData true

Imports htmlwidgets,
magrittr,
htmltools

RoxygenNote 5.0.1

R topics documented:

`add_ist` *Add Series*

Description

Add series(s) to chart

Usage

```
add_ist(p, values, name, ...)
```

Arguments

`p`	a chartist object.
`values`	values to plot on y axis.
`name`	name the serie, see details (optional).
`...`	Additional parameter.

Details

Naming the serie (`name`) is useful if you want to apply different options (`opt_ist`) for each serie later on. If no name is specified then the assigns one; `type` + `i` where `i` is the serie index and starts from 1. Names can be retrieved using `name_ist`. See examples.

See Also

`name_ist`, `opt_ist`

Examples

```
# basic example
mtcars[1:10,] %>%
  chart_ist(x = mpg) %>%
  add_ist(disp) %>%
  add_ist(hp)

# option applies to both "disp" and "hp"
mtcars[1:10,] %>%
  chart_ist(x = mpg) %>%
  add_ist(disp) %>%
  add_ist(hp) %>%
  opt_ist(showArea = TRUE)

# use names to apply different option to each serie
mtcars[1:10,] %>%
  chart_ist(x = mpg) %>%
  add_ist(disp, name = "disp") %>%
```

```
  add_ist(hp, name = "hp") %>%
  opt_ist(name = "hp", showArea = TRUE, showPoint = FALSE) %>%
  opt_ist(name = "disp", lineSmoothing = "step")

# if you haven't assigned names you can retrieve generated ones with name_ist
# See details for generated names logic
mtcars[1:10,] %>%
  chart_ist(x = mpg) %>%
  add_ist(disp, name = "disp") %>%
  add_ist(hp, name = "hp") %>%
  name_ist()
```

`anim_ist` *Animate chart*

Description

Animate chart.

Usage

```
anim_ist(p, type, anim, begin, dur, from, to, easing, ...)
```

Arguments

`p`	a chartist object.
`type`	chart element type to animate (i.e.: line, or grid).
`anim`	animation (i.e.: opacity).
`begin`	begin index.
`dur`	duration of animation in ms.
`from`	start of animation.
`to`	end of animation.
`easing`	apply easing.
`...`	any other param to pass to `anim`.

Examples

```
mtcars %>%
    chart_ist(wt) %>%
    add_ist(disp) %>%
    add_ist(hp) %>%
    anim_ist(type = c("line", "point"),
        anim = "opacity",
        begin = 0,
        from = 0,
        to = 1,
        dur = 2000)
```

baropt_ist *Bar options*

Description

Pass options to bar type.

Usage

```
baropt_ist(p, fullWidth = TRUE, centerBars = FALSE, stackBars = FALSE,
  distributeSeries = FALSE, seriesBarDistance, width, height, low, high,
  chartPadding, ...)
```

Arguments

p	a chartist object.
fullWidth	When set to true, the last grid line on the x-axis is not drawn and the chart elements will expand to the full available width of the chart. For the last label to be drawn correctly you might need to add chart padding or offset the last label with a draw event handler.
centerBars	set to TRUE to draw bars on the grid lines, FALSE to draw on grid lines.
stackBars	whether to stack bars, default to FALSE.
distributeSeries	distributed serie along x axis only works for 1 serie, defaults to FALSE.
seriesBarDistance	distance in pixels between bar groups.
width	set fixed width in pixels or percent (i.e.: 300px, 70%).
height	set fixed height in pixels or percent (i.e.: 300px, 70%).
low	lower bound of value.
high	higher bound of value.
chartPadding	padding around chart div.
...	additional options.

Examples

```
mtcars$models <- rownames(mtcars)

mtcars[1:10,] %>%
    chart_ist(x = models, type = "bar") %>%
    add_ist(cyl) %>%
    add_ist(carb) %>%
    add_ist(gear) %>%
    baropt_ist(stackBars = TRUE)

mtcars[1:10,] %>%
    chart_ist(x = models, type = "bar") %>%
    add_ist(cyl) %>%
    add_ist(carb) %>%
    add_ist(gear) %>%
    baropt_ist(seriesBarDistance = 10, centerBars = TRUE)
```

chartist-shiny *Shiny bindings for chartist*

Description

Output and render functions for using chartist within Shiny applications and interactive Rmd documents.

Usage

```
chartistOutput(outputId, width = "100%", height = "400px")

renderChartist(expr, env = parent.frame(), quoted = FALSE)
```

Arguments

outputId	output variable to read from
width, height	Must be a valid CSS unit (like '100%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended.
expr	An expression that generates a chartist
env	The environment in which to evaluate expr.
quoted	Is expr a quoted expression (with quote())? This is useful if you want to save an expression in a variable.

chart_ist *Initiate a chartist visualisation*

Description

Initiate a chartist chart.

Usage

```
chart_ist(data, x, type = "line", width = NULL, height = NULL,
  elementId = NULL)
```

Arguments

data	data.frame containing data to plot.
x	Must be passed for line and bar (type).
type	type of charts, defaults to line, may also be bar or pie.
width, height	Must be a valid CSS unit (like '100%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended, defaults to NULL.
elementId	Use specific element id.

Examples

```
mtcars %>%
    chart_ist(cyl) %>%
    add_ist(hp)
```

danim_ist *Animate donut chart*

Description

Out of the box animation for donut chart.

Usage

```
danim_ist(p)
```

Arguments

p	a chartist object.

Examples

```
mtcars[1:5,] %>%
    chart_ist(x = hp, type = "pie") %>%
    add_ist(disp) %>%
    pieopt_ist(donut = TRUE, showLabel = TRUE) %>%
    danim_ist()
```

ganim_ist *Animate grid*

Description

Out of the box animation for the chart grid.

Usage

```
ganim_ist(p)
```

Arguments

p	a chartist object.

Examples

```
mtcars %>%
    chart_ist(wt) %>%
    add_ist(disp) %>%
    add_ist(hp) %>%
    ganim_ist()
```

gauge_ist *Make a gauge from a pie*

Description

Helper function to easily make a gauge chart from a pie

Usage

```
gauge_ist(p, ...)
```

Arguments

p	a chartist object
...	additional parameters to pass to opt_ist

Examples

```
mtcars[1:5,] %>%
    chart_ist(type = "pie") %>%
    add_ist(disp) %>%
    gauge_ist()
```

hover_ist *Add hover tooltip*

Description

Add hover tooltip

Usage

```
hover_ist(p, prefix = "", suffix = "")
```

Arguments

p	a chartist object.
prefix	add prefix to label.
suffix	add suffix to label.

Details

The tooltip displays series name which is passed in add_ist

Examples

```
mtcars %>%
    chart_ist(disp) %>%
    add_ist(values = hp, name = "Your Tooltip") %>%
    hover_ist(prefix = "US$")

mtcars %>%
    chart_ist(disp) %>%
    add_ist(values = hp, name = "Your <span style='color:blue;'>Tooltip</span>") %>%
    hover_ist()
```

---

label_ist *Add point label*

Description

Add data point labels to `line` type chart.

Usage

```
label_ist(p, position = "middle")
```

Arguments

`p`	a chartist object.
`position`	position of label, defaults to `middle`.

Examples

```
mtcars %>%
    chart_ist(disp) %>%
    add_ist(hp) %>%
    label_ist()
```

---

lanim_ist *Line and area chart animation*

Description

Out of the box animation for line and/or area chart.

Usage

```
lanim_ist(p, type = c("line", "area"))
```

Arguments

`p`	a chartist object.
`type`	chart element type to animate (i.e.: line, or grid).

Examples

```
mtcars %>%
    chart_ist(wt) %>%
    add_ist(disp, name = "disp") %>%
    add_ist(hp, name = "hp") %>%
    opt_ist(showPoint = FALSE) %>%
    lineopt_ist(name = "hp", showArea = TRUE) %>%
    lanim_ist()
```

---

lineopt_ist *Line options*

Description

Pass options to `line` type.

Usage

```
lineopt_ist(p, name, fillHoles = FALSE, showPoint = TRUE,
  showArea = FALSE, showLine = TRUE, areaBase = 0,
  lineSmoothing = "simple", fullWidth = TRUE, distributeSeries = FALSE,
  width, height, low, high, chartPadding, ...)
```

Arguments

`p`	a chartist object.
`name`	name the serie, see details (optional).
`fillHoles`	whether to fill missing data, defaults to `FALSE`.
`showPoint`	whether to show points, defaults to `TRUE`.
`showArea`	turn line chart into area chart, defaults to `FALSE`.
`showLine`	set `FALSE` to hide line.
`areaBase`	base for the chart, defaults to 0.
`lineSmoothing`	defaults to `simple`, can take an `integer`, `step`, `none` or an htmlwidgets javascript function (class `JS_EVAL`).
`fullWidth`	When set to true, the last grid line on the x-axis is not drawn and the chart elements will expand to the full available width of the chart. For the last label to be drawn correctly you might need to add chart padding or offset the last label with a draw event handler.
`distributeSeries`	distributed serie along x axis only works for 1 serie, defaults to `FALSE`.
`width`	set fixed width in pixels or percent (i.e.: `300px`, `70%`).
`height`	set fixed height in pixels or percent (i.e.: `300px`, `70%`).
`low`	lower bound of value.
`high`	higher bound of value.
`chartPadding`	padding around chart div.
`...`	additional options.

Examples

```
mtcars %>%
   chart_ist(x = mpg, type = "line") %>%
   add_ist(disp) %>%
   lineopt_ist(showArea = TRUE, showLine = FALSE, showPoint = FALSE)

mtcars %>%
   chart_ist(x = mpg, type = "line") %>%
   add_ist(disp) %>%
   lineopt_ist(lineSmoothing = "step", showLine = TRUE, showPoint = FALSE)

mtcars %>%
   chart_ist(x = mpg, type = "line") %>%
   add_ist(disp, name = "disp") %>%
   add_ist(hp, name = "hp") %>%
   lineopt_ist(name = "disp", lineSmoothing = "none") %>%
   lineopt_ist(name = "hp", showArea = TRUE, showPoint = FALSE)

mtcars %>%
   chart_ist(qsec) %>%
   add_ist(mpg) %>%
   lineopt_ist(lineSmoothing = htmlwidgets::JS("
       Chartist.Interpolation.cardinal({tension: 0.2})"))
```

---

loop_ist *Loop animation*

Description

Loop animation

Usage

```
loop_ist(p, ms = 5000)
```

Arguments

p	a chartist object.
ms	Milliseconds for loop, defaults to 500.

Examples

```
mtcars %>%
    chart_ist(qsec) %>%
    add_ist(hp) %>%
    lanim_ist() %>%
    loop(6000)
```

name_ist *Get assigned name*

Description

Get the generated series name.

Usage

```
name_ist(p)
```

Arguments

p	a chartist object

Examples

```
# default names
mtcars[1:20,] %>%
    chart_ist(x = qsec) %>%
    add_ist(disp) %>%
    add_ist(hp) %>%
    name_ist()

#assigned names
mtcars[1:20,] %>%
    chart_ist(x = qsec) %>%
    add_ist(disp, name = "SERIE1") %>%
    add_ist(hp, name = "hp") %>%
    name_ist()
```

opt_ist *Configure options for chartist visualisation*

Description

Pass any option to any chart here. Also see options specific to your chart type, pieopt_ist, baropt_ist or lineopt_ist

Usage

```
opt_ist(p, name, width, height, low, high, chartPadding, ...)
```

Arguments

p	a chartist object.
name	name the serie, see details (optional).
width	set fixed width in pixels or percent (i.e.: 300px, 70%).
height	set fixed height in pixels or percent (i.e.: 300px, 70%).
low	lower bound of value.
high	higher bound of value.
chartPadding	padding around chart div.
...	additional options.

See Also

baropt_ist, pieopt_ist, lineopt_ist

Examples

```
mtcars$models <- row.names(mtcars)

mtcars[1:10,] %>%
    chart_ist(x = models) %>%
    add_ist(wt) %>%
    add_ist(drat) %>%
    opt_ist(chartPadding = 10, width = 700, height = 200)

mtcars[1:10,] %>%
    chart_ist(x = qsec) %>%
    add_ist(disp, name = "DISP") %>%
    add_ist(hp, name = "HP") %>%
    opt_ist(name = "DISP", lineSmoothing = "step") %>%
    opt_ist(name = "HP",
        showArea = TRUE,
        showLine = FALSE,
        showPoint = FALSE)
```

---

peak_ist *Turn bar chart into peak chart*

Description

Turn bar chart into peak chart

Usage

```
peak_ist(p, size = 15)
```

Arguments

p	a chartist object.
size	point size.

Examples

```
mtcars %>%
    chart_ist(qsec, type = "bar") %>%
    add_ist(hp) %>%
    peak_ist()
```

`pieopt_ist` *Pie and donut options*

Description

Pass options to `pie` type.

Usage

```
pieopt_ist(p, percent = FALSE, donut = FALSE, showLabel = FALSE,
  startAngle, total, donutWidth, labelDirection, labelOffset, width, height,
  low, high, chartPadding, ...)
```

Arguments

`p`	a chartist object.
`percent`	convert to percent.
`donut`	set to `TRUE` for donut chart, defaults to `FALSE`.
`showLabel`	set to `FALSE` to hide labels.
`startAngle`	start angle of the pie chart in degrees.
`total`	By specifying a total value, the sum of the values in the series must be this total.
`donutWidth`	donut width.
`labelDirection`	label direction takes `neutral`, `explode` or `implode`.
`labelOffset`	numeric to offset labels.
`width`	set fixed width in pixels or percent (i.e.: `300px`, `70%`).
`height`	set fixed height in pixels or percent (i.e.: `300px`, `70%`).
`low`	lower bound of value.
`high`	higher bound of value.
`chartPadding`	padding around chart div.
`...`	additional options.

See Also

`gauge_ist`

Examples

```
mtcars$models <- rownames(mtcars)

mtcars[1:5,] %>%
    chart_ist(type = "pie") %>%
    add_ist(disp) %>%
    pieopt_ist(startAngle = 270,
        donut = TRUE,
        donutWidth = 50,
        showLabel = FALSE)

mtcars[1:5,] %>%
    chart_ist(x = models, type = "pie") %>%
    add_ist(disp) %>%
    pieopt_ist(labelDirection = "explode",
        labelOffset = 100,
        chartPadding = 50)

mtcars[1:5,] %>%
    chart_ist(type = "pie") %>%
    add_ist(disp) %>%
    pieopt_ist(percent = TRUE)
```

---

ratio_ist *Select aspect ratio*

Description

Change aspect ratio of chart.

Usage

```
ratio_ist(p, ratio)
```

Arguments

p	a chartist object.
ratio	ratio of chart, see details and examples.

Details

Valid values for `ratio`:

- `square` or `1`
- `minor-second` or `15:16`
- `major-second` or `8:9`
- `minor-third` or `5:6`
- `major-third` or `4:5`
- `perfect-fourth` or `3:4`
- `perfect-fifth` or `2:3`

- minor-sixth or 5:8
- golden-section or 1:1.618
- major-sixth or 3:5
- minor-seventh or 9:16
- major-seventh or 8:15
- octave or 1:2
- major-tenth or 2:5
- major-eleventh or 3:8
- major-twelfth or 1:3
- double-octave or 1:4

Examples

```
mtcars$models <- row.names(mtcars)

mtcars %>%
    chart_ist(x = models) %>%
    add_ist(disp) %>%
    ratio_ist(ratio = "square")
```

---

resp_ist *Configure responsive options for chartist visualisation*

Description

Configure responsive options for chartist visualisation

Usage

```
resp_ist(p, query, width, height, low, high, chartPadding, ...)
```

Arguments

p	a chartist object.
query	responsive query.
width	set fixed width in pixels or percent (i.e.: 300px, 70%).
height	set fixed height in pixels or percent (i.e.: 300px, 70%).
low	lower bound of value.
high	higher bound of value.
chartPadding	padding around chart div.
...	additional options.

Examples

```
mtcars$models <- row.names(mtcars)

mtcars %>%
    chart_ist(models) %>%
    add_ist(qsec) %>%
    resp_ist(query = "screen and (max-width: 640px)", low = 15,
        chartPadding = 50) %>%
    resp_ist(query = "screen and (min-width: 641px) and (max-width: 1024px)",
        chartPadding = 0)
```

---

sanim_ist *Scatter animation*

Description

Out of the box animation for scatter plot.

Usage

```
sanim_ist(p)
```

Arguments

p	a chartist object.

Examples

```
mtcars %>%
    chart_ist(wt) %>%
    add_ist(disp) %>%
    add_ist(hp) %>%
    scatter_ist() %>%
    sanim_ist()
```

---

scatter_ist *Make a scatter plot from a line chart*

Description

Helper function to easily turn a line chart into a scatter plot

Usage

```
scatter_ist(p, ...)
```

Arguments

p	a chartist object
...	additional parameters to pass to opt_ist.

Examples

```
mtcars$models <- rownames(mtcars)
mtcars[1:20,] %>%
    chart_ist(x = models) %>%
    add_ist(disp) %>%
    scatter_ist()
```

---

thresh_ist *Add threshold*

Description

Add threshold

Usage

```
thresh_ist(p, threshold)
```

Arguments

p	a chartist object.
threshold	threshold, defaults to mean of first series passed with add_ist.

Examples

```
mtcars %>%
    chart_ist(disp) %>%
    add_ist(hp) %>%
    thresh_ist()

mtcars %>%
    chart_ist(disp) %>%
    add_ist(hp) %>%
    thresh_ist(220)
```

---

xaxis_ist *Tweak X axis*

Description

Tweak the x axis for chartist visualisation.

Usage

```
xaxis_ist(p, showLabel = TRUE, showGrid = TRUE, suffix = "",
  prefix = "", position, offset, labelOffset, scaleMinSpace, ...)
```

Arguments

p	a chartist object.
showLabel	set to FALSE to hide labels.
showGrid	set to FALSE to hide the grid.
suffix	add suffix to label.
prefix	add prefix to label.
position	positon of axis.
offset	offset axis.
labelOffset	offset labels, takes integer, vector or list (i.e.: 1, c(1,2), list(x = 1, y = 2).
scaleMinSpace	minimum height in pixel of scale.
...	additional options.

Examples

```
mtcars$models <- row.names(mtcars)

mtcars[1:20,] %>%
    chart_ist(x = models, type = "bar") %>%
    add_ist(disp) %>%
    xaxis_ist(showLabel = FALSE, showGrid = FALSE)

mtcars[1:10,] %>%
    chart_ist(x = mpg, type = "bar") %>%
    add_ist(disp) %>%
    xaxis_ist(suffix = "MPG", scaleMinSpace = 100)
```

---

xtitle_ist *Add x axis title*

Description

Add x axis title

Usage

```
xtitle_ist(p, title = "", textAnchor = "middle", flipTitle = FALSE,
  offsetx = 0, offsety = 0)
```

Arguments

p	a chartist object.
title	axis title.
textAnchor	title position, defaults to middle.
flipTitle	set to TRUE to flip title on x axis.
offsetx	offset x aligment of title.
offsety	offsety y alignment of title.

Examples

```
mtcars %>%
    chart_ist(disp) %>%
    add_ist(values = hp) %>%
    xtitle_ist(title = "HP", offsety = 30)
```

---

yaxis_ist *Tweak Y axis*

Description

Tweak the y axis for chartist visualisation.

Usage

```
yaxis_ist(p, showLabel = TRUE, showGrid = TRUE, suffix = "",
  prefix = "", position, offset, labelOffset, scaleMinSpace, ...)
```

Arguments

p	a chartist object.
showLabel	set to FALSE to hide labels.
showGrid	set to FALSE to hide the grid.
suffix	add suffix to label.
prefix	add prefix to label.
position	positon of axis.
offset	offset axis.
labelOffset	offset labels, takes integer, vector or list (i.e.: 1, c(1,2), list(x = 1, y = 2).
scaleMinSpace	minimum height in pixel of scale.
...	additional options.

Examples

```
mtcars$models <- row.names(mtcars)

mtcars[1:5,] %>%
    chart_ist(x = models, type = "bar") %>%
    add_ist(disp) %>%
    yaxis_ist(suffix = " $")

mtcars[1:10,] %>%
    chart_ist(x = mpg, type = "bar") %>%
    add_ist(disp) %>%
    yaxis_ist(offset = 200, labelOffset = list(x = -50, y = 0))
```

`ytitle_ist` *Add y axis title*

Description

Add y axis title

Usage

```
ytitle_ist(p, title = "", flipTitle = FALSE, offsetx = 0, offsety = 0)
```

Arguments

`p`	a chartist object.
`title`	axis title.
`flipTitle`	set to `TRUE` to flip title on x axis.
`offsetx`	offset x aligment of title.
`offsety`	offsety y alignment of title.

Examples

```
mtcars %>%
    chart_ist(disp) %>%
    add_ist(values = hp) %>%
    ytitle_ist(title = "disp", offsetx = 30)
```

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