

Package ‘leafletlegend’

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Type Package

Title Add Custom Legends to 'leaflet' Maps

Version 1.3.0

Description Provides extensions to the 'leaflet' package to customize legends with images, text styling, orientation, sizing, and symbology and functions to create symbols to plot on maps.

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Encoding UTF-8

Depends R (>= 3.3.0)

Imports leaflet, htmltools, stats, base64enc, htmlwidgets

URL <https://leafletlegend.delveds.com>,
<https://github.com/tomroh/leafletlegend>

BugReports <https://github.com/tomroh/leafletlegend/issues>

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Contents

addLeafLegends	2
addLegendAwesomeIcon	8
addLegendImage	9
availableShapes	11
legendSymbols	12
mapSymbols	19

addLeafLegends

*Add Customizable Color Legends to a 'leaflet' map widget***Description**

Functions for more control over the styling of 'leaflet' legends. The 'leaflet' map is passed through and the output is a 'leaflet' control so that the legends are integrated with other functionality of the API. Style the text of the labels, the symbols used, orientation of the legend items, and sizing of all elements.

Usage

```
addLegendNumeric(
  map,
  pal,
  values,
  title = NULL,
  shape = c("rect", "stadium"),
  orientation = c("vertical", "horizontal"),
  width = 20,
  height = 100,
  bins = 7,
  numberFormat = function(x) {
    prettyNum(x, format = "f", big.mark = ",", digits =
      3, scientific = FALSE)
  },
  tickLength = 4,
  tickWidth = 1,
  decreasing = FALSE,
  fillOpacity = 1,
  group = NULL,
  labels = NULL,
  naLabel = "NA",
  labelStyle = "",
  className = "info legend leaflet-control",
  data = leaflet::getMapData(map),
  ...
)

addLegendQuantile(
  map,
  pal,
  values,
  title = NULL,
  labelStyle = "",
  shape = "rect",
```

```

orientation = c("vertical", "horizontal"),
width = 24,
height = 24,
numberFormat = function(x) {
  prettyNum(x, big.mark = ",", scientific = FALSE,
    digits = 1)
},
opacity = 1,
fillOpacity = opacity,
group = NULL,
className = "info legend leaflet-control",
naLabel = "NA",
between = " - ",
data = leaflet::getMapData(map),
...
)

```

```

addLegendBin(
  map,
  pal,
  values,
  title = NULL,
  labelStyle = "",
  shape = "rect",
  orientation = c("vertical", "horizontal"),
  width = 24,
  height = 24,
  numberFormat = function(x) {
    format(round(x, 3), big.mark = ",", trim = TRUE,
      scientific = FALSE)
  },
  opacity = 1,
  fillOpacity = opacity,
  group = NULL,
  className = "info legend leaflet-control",
  naLabel = "NA",
  between = " - ",
  labelCutpoints = FALSE,
  tickLength = 4,
  tickWidth = 1,
  data = leaflet::getMapData(map),
  ...
)

```

```

addLegendFactor(
  map,
  pal,
  values,

```

```

    title = NULL,
    labelStyle = "",
    shape = "rect",
    orientation = c("vertical", "horizontal"),
    width = 24,
    height = 24,
    opacity = 1,
    fillOpacity = opacity,
    group = NULL,
    className = "info legend leaflet-control",
    naLabel = "NA",
    data = leaflet::getMapData(map),
    ...
  )

```

Arguments

map	a map widget object created from 'leaflet'
pal	the color palette function, generated from colorNumeric
values	the values used to generate colors from the palette function
title	the legend title, pass in HTML to style
shape	the desired shape of the symbol, See availableShapes
orientation	stack the legend items vertically or horizontally
width	in pixels
height	in pixels
bins	an approximate number of tick-marks on the color gradient for the colorNumeric palette if it is of length one; you can also provide a numeric vector as the pre-defined breaks
numberFormat	formatting functions for numbers that are displayed e.g. format, prettyNum
tickLength	length of tick marks in pixels, used when labelCutpoints = TRUE
tickWidth	stroke width of tick marks in pixels, used when labelCutpoints = TRUE
decreasing	order of numbers in the legend
fillOpacity	fill opacity of the legend items
group	group name of a leaflet layer group
labels	labels
naLabel	the legend label for NAs in values
labelStyle	character string of style argument for HTML text
className	extra CSS class to append to the control, space separated
data	a data object. Currently supported objects are matrices, data frames, spatial objects from the sp package (SpatialPoints, SpatialPointsDataFrame, Polygon, Polygons, SpatialPolygons, SpatialPolygonsDataFrame, Line, Lines, SpatialLines, and SpatialLinesDataFrame), and spatial data frames from the sf package.

... arguments to pass to [addControl](#) for addLegendNumeric, addLegendQuantile, addLegendBin, and addLegendFactor

opacity opacity of the legend items

between a separator between legend range labels

labelCutpoints if TRUE, labels are placed at bin boundaries (cutpoints) with tick marks instead of beside each symbol. Only supported for vertical orientation.

Value

an object from [addControl](#)

Examples

```
library(leaflet)

data(quakes)

# Numeric Legend

numPal <- colorNumeric('viridis', quakes$depth)
leaflet() %>%
  addTiles() %>%
  addLegendNumeric(
    pal = numPal,
    values = quakes$depth,
    position = 'topright',
    title = 'addLegendNumeric (Horizontal)',
    orientation = 'horizontal',
    shape = 'rect',
    decreasing = FALSE,
    bins = 5,
    height = 20,
    width = 150
  ) %>%
  addLegendNumeric(
    pal = numPal,
    values = quakes$depth,
    position = 'topright',
    title = htmltools::tags$div('addLegendNumeric (Decreasing)',
    style = 'font-size: 24px; text-align: center; margin-bottom: 5px;'),
    orientation = 'vertical',
    shape = 'stadium',
    decreasing = TRUE,
    height = 100,
    width = 20
  ) %>%
  addLegend(pal = numPal, values = quakes$depth, title = 'addLegend')

# Quantile Legend
# defaults to adding quantile numeric break points
```

```

quantPal <- colorQuantile('viridis', quakes$mag, n = 5)
leaflet() %>%
  addTiles() %>%
  addCircleMarkers(data = quakes,
                    lat = ~lat,
                    lng = ~long,
                    color = ~quantPal(mag),
                    opacity = 1,
                    fillOpacity = 1
  ) %>%
  addLegendQuantile(pal = quantPal,
                    values = quakes$mag,
                    position = 'topright',
                    title = 'addLegendQuantile',
                    numberFormat = function(x) {prettyNum(x, big.mark = ',',
                                                            scientific = FALSE, digits = 2)},
                    shape = 'circle') %>%
  addLegendQuantile(pal = quantPal,
                    values = quakes$mag,
                    position = 'topright',
                    title = htmltools::tags$div('addLegendQuantile',
                                                  htmltools::tags$br(),
                                                  '(Omit Numbers)'),
                    numberFormat = NULL,
                    shape = 'circle') %>%
  addLegend(pal = quantPal, values = quakes$mag, title = 'addLegend')

# Factor Legend
# Style the title with html tags, several shapes are supported drawn with svg

quakes[['group']] <- sample(c('A', 'B', 'C'), nrow(quakes), replace = TRUE)
factorPal <- colorFactor('Dark2', quakes$group)
leaflet() %>%
  addTiles() %>%
  addCircleMarkers(
    data = quakes,
    lat = ~ lat,
    lng = ~ long,
    color = ~ factorPal(group),
    opacity = 1,
    fillOpacity = 1
  ) %>%
  addLegendFactor(
    pal = factorPal,
    title = htmltools::tags$div('addLegendFactor', style = 'font-size: 24px;
    color: red;'),
    values = quakes$group,
    position = 'topright',
    shape = 'triangle',
    width = 50,
    height = 50
  ) %>%
  addLegend(pal = factorPal,

```

```

        values = quakes$group,
        title = 'addLegend')

# Bin Legend
# Restyle the text of the labels, change the legend item orientation

binPal <- colorBin('Set1', quakes$mag)
leaflet(quakes) %>%
  addTiles() %>%
  addCircleMarkers(
    lat = ~ lat,
    lng = ~ long,
    color = ~ binPal(mag),
    opacity = 1,
    fillOpacity = 1
  ) %>%
  addLegendBin(
    pal = binPal,
    position = 'topright',
    values = ~mag,
    title = 'addLegendBin',
    labelStyle = 'font-size: 18px; font-weight: bold;',
    orientation = 'horizontal'
  ) %>%
  addLegend(pal = binPal,
            values = quakes$mag,
            title = 'addLegend')

# Group Layer Control
# Works with baseGroups and overlayGroups

leaflet() %>%
  addTiles() %>%
  addLegendNumeric(
    pal = numPal,
    values = quakes$depth,
    position = 'topright',
    title = 'addLegendNumeric',
    group = 'Numeric Data'
  ) %>%
  addLegendQuantile(
    pal = quantPal,
    values = quakes$mag,
    position = 'topright',
    title = 'addLegendQuantile',
    group = 'Quantile'
  ) %>%
  addLegendBin(
    data = quakes,
    pal = binPal,
    position = 'bottomleft',
    title = 'addLegendBin',
    group = 'Bin',

```

```

        values = ~mag
    ) %>%
    addLayersControl(
      baseGroups = c('Numeric Data', 'Quantile'), overlayGroups = c('Bin'),
      position = 'bottomright'
    )

```

addLegendAwesomeIcon *Add a legend with Awesome Icons*

Description

Add a legend with Awesome Icons

Usage

```

addLegendAwesomeIcon(
  map,
  iconSet,
  title = NULL,
  labelStyle = "vertical-align: middle;",
  orientation = c("vertical", "horizontal"),
  marker = TRUE,
  group = NULL,
  className = "info legend leaflet-control",
  ...
)

```

Arguments

map	a map widget object created from 'leaflet'
iconSet	a named list from awesomeIconList , the names will be the labels in the legend
title	the legend title, pass in HTML to style
labelStyle	character string of style argument for HTML text
orientation	stack the legend items vertically or horizontally
marker	whether to show the marker or only the icon
group	group name of a leaflet layer group
className	extra CSS class to append to the control, space separated
...	arguments to pass to addControl

Value

an object from [addControl](#)

Examples

```
library(leaflet)
data(quakes)
iconSet <- awesomeIconList(
  `Font Awesome` = makeAwesomeIcon(icon = "font-awesome", library = "fa",
    iconColor = 'gold', markerColor = 'red',
    spin = FALSE,
    squareMarker = TRUE,
    iconRotate = 30,
  ),
  Ionic = makeAwesomeIcon(icon = "ionic", library = "ion",
    iconColor = '#ffffff', markerColor = 'blue',
    spin = TRUE,
    squareMarker = FALSE),
  Glyphicon = makeAwesomeIcon(icon = "plus-sign", library = "glyphicon",
    iconColor = 'rgb(192, 255, 0)',
    markerColor = 'darkpurple',
    spin = TRUE,
    squareMarker = FALSE)
)
leaflet(quakes[1:3,]) %>%
  addTiles() %>%
  addAwesomeMarkers(lat = ~lat,
    lng = ~long,
    icon = iconSet) %>%
  addLegendAwesomeIcon(iconSet = iconSet,
    orientation = 'horizontal',
    title = htmltools::tags$div(
      style = 'font-size: 20px;',
      'Awesome Icons'),
    labelStyle = 'font-size: 16px;') %>%
  addLegendAwesomeIcon(iconSet = iconSet,
    orientation = 'vertical',
    marker = FALSE,
    title = htmltools::tags$div(
      style = 'font-size: 20px;',
      'Awesome Icons'),
    labelStyle = 'font-size: 16px;')
```

addLegendImage

Add a Legend with Images

Description

Creates a legend with images that are embedded into a 'leaflet' map so that images do not need to be packaged when saving a 'leaflet' map as HTML. Full control over the label and title style. The 'leaflet' map is passed through and the output is a control so that legend is fully integrated with other functionalities.

Usage

```
addLegendImage(
  map,
  images,
  labels,
  title = NULL,
  labelStyle = "font-size: 24px; vertical-align: middle;",
  orientation = c("vertical", "horizontal"),
  width = 20,
  height = 20,
  group = NULL,
  className = "info legend leaflet-control",
  ...
)
```

Arguments

map	a map widget object created from 'leaflet'
images	path to the image file
labels	labels for each image
title	the legend title, pass in HTML to style
labelStyle	character string of style argument for HTML text
orientation	stack the legend items vertically or horizontally
width	in pixels
height	in pixels
group	group name of a leaflet layer group
className	extra CSS class to append to the control, space separated
...	arguments to pass to addControl

Value

an object from [addControl](#)

Examples

```
library(leaflet)
data(quakes)

quakes1 <- quakes[1:10,]

colors <- c('blue', 'red', 'yellow', 'green', 'orange', 'purple')
i <- as.integer(cut(quakes$mag, breaks = quantile(quakes$mag, seq(0,1,1/6)),
                  include.lowest = TRUE))
leafImg <- system.file(sprintf('img/leaf-%s.png', colors),
                       package = 'leafletlegend')
leafIcons <- icons(
```

```

    iconUrl = leafImg[i],
    iconWidth = 133/236 * 50, iconHeight = 50
  )
  leaflet(data = quakes) %>% addTiles() %>%
    addMarkers(~long, ~lat, icon = leafIcons) %>%
    addLegendImage(images = leafImg,
      labels = colors,
      width = 133/236 * 50,
      height = 50,
      orientation = 'vertical',
      title = htmltools::tags$div('Leaf',
        style = 'font-size: 24px;
        text-align: center;'),
      position = 'topright')

# use raster images with size encodings
height <- sizeNumeric(quakes$depth, baseSize = 40)
width <- height * 38 / 95
symbols <- icons(
  iconUrl = leafImg[4],
  iconWidth = width,
  iconHeight = height)
probs <- c(.2, .4, .6, .8)
leaflet(quakes) %>%
  addTiles() %>%
  addMarkers(icon = symbols,
    lat = ~lat, lng = ~long) %>%
  addLegendImage(
    images = rep(leafImg[4], 4),
    labels = round(quantile(height, probs = probs), 0),
    width = quantile(height, probs = probs) * 38 / 95,
    height = quantile(height, probs = probs),
    title = htmltools::tags$div(
      'Leaf',
      style = 'font-size: 24px; text-align: center; margin-bottom: 5px;'),
    position = 'topright', orientation = 'vertical')

```

availableShapes	<i>Available shapes for map symbols</i>
-----------------	---

Description

Available shapes for map symbols

Usage

```
availableShapes()
```

Value

list of available shapes

`legendSymbols`*Add a legend for the sizing of symbols or the width of lines*

Description

Add a legend for the sizing of symbols or the width of lines

Usage

```
addLegendSize(  
  map,  
  pal,  
  values,  
  title = NULL,  
  labelStyle = "vertical-align: middle;",  
  shape = "rect",  
  orientation = c("vertical", "horizontal"),  
  color,  
  fillColor = color,  
  strokeWidth = 1,  
  opacity = 1,  
  fillOpacity = opacity,  
  breaks = 5,  
  baseSize = 20,  
  minSize = NULL,  
  maxSize = NULL,  
  numberFormat = function(x) {  
    prettyNum(x, big.mark = ",", scientific = FALSE,  
    digits = 1)  
  },  
  group = NULL,  
  className = "info legend leaflet-control",  
  stacked = FALSE,  
  data = leaflet::getMapData(map),  
  ...  
)  
  
addLegendLine(  
  map,  
  pal,  
  values,  
  title = NULL,  
  labelStyle = "vertical-align: middle;",  
  orientation = c("vertical", "horizontal"),  
  width = 20,  
  color,  
  opacity = 1,
```

```

    fillOpacity = opacity,
    breaks = 5,
    baseSize = 10,
    minSize = NULL,
    maxSize = NULL,
    numberFormat = function(x) {
      prettyNum(x, big.mark = ",", scientific = FALSE,
        digits = 1)
    },
    group = NULL,
    className = "info legend leaflet-control",
    data = leaflet::getMapData(map),
    ...
  )

```

```

addLegendSymbol(
  map,
  pal,
  values,
  title = NULL,
  labelStyle = "vertical-align: middle;",
  shape,
  orientation = c("vertical", "horizontal"),
  color,
  fillColor = color,
  strokeWidth = 1,
  opacity = 1,
  fillOpacity = opacity,
  width = 20,
  height = width,
  group = NULL,
  className = "info legend leaflet-control",
  dashArray = NULL,
  label = NULL,
  data = leaflet::getMapData(map),
  ...
)

```

```

addLegendText(
  map,
  pal,
  values,
  text,
  labels = NULL,
  title = NULL,
  labelStyle = "vertical-align: middle;",
  orientation = c("vertical", "horizontal"),
  color,

```

```

    fillColor = color,
    opacity = 1,
    fillOpacity = opacity,
    width = 20,
    height = width,
    fontSize = round(min(width, height) * 0.6),
    fontFamily = NULL,
    group = NULL,
    className = "info legend leaflet-control",
    data = leaflet::getMapData(map),
    ...
)

addLegendTextSize(
  map,
  pal,
  values,
  text,
  title = NULL,
  labelStyle = "vertical-align: middle;",
  orientation = c("vertical", "horizontal"),
  color,
  fillColor = color,
  opacity = 1,
  fillOpacity = opacity,
  breaks = 5,
  baseSize = 20,
  numberFormat = function(x) {
    prettyNum(x, big.mark = ",", scientific = FALSE,
              digits = 1)
  },
  fontFamily = NULL,
  group = NULL,
  className = "info legend leaflet-control",
  data = leaflet::getMapData(map),
  ...
)

```

Arguments

map	a map widget object created from 'leaflet'
pal	the color palette function, generated from colorNumeric
values	the values used to generate sizes and if colorValues is not specified and pal is given, then the values are used to generate colors from the palette function
title	the legend title, pass in HTML to style
labelStyle	character string of style argument for HTML text
shape	the desired shape of the symbol, See availableShapes

orientation	stack the legend items vertically or horizontally
color	the color of the legend symbols, if omitted pal is used
fillColor	fill color of symbol
strokeWidth	width of symbol outline
opacity	opacity of the legend items
fillOpacity	fill opacity of the legend items
breaks	an integer specifying the number of breaks or a numeric vector of the breaks. if a named vector is given, the names are used as labels
baseSize	re-scaling size in pixels of the mean of the values, the average value will be this exact size
minSize	minimum size in pixels of a symbol; values that would scale below this are clamped to minSize; baseSize must be greater than minSize
maxSize	maximum size in pixels of a symbol; values that would scale above this are clamped to maxSize; baseSize must be less than maxSize
numberFormat	formatting functions for numbers that are displayed e.g. format, prettyNum
group	group name of a leaflet layer group
className	extra CSS class to append to the control, space separated
stacked	If TRUE, symbols are overlayed onto each other for a more compact size legend
data	a data object. Currently supported objects are matrices, data frames, spatial objects from the sp package (SpatialPoints, SpatialPointsDataFrame, Polygon, Polygons, SpatialPolygons, SpatialPolygonsDataFrame, Line, Lines, SpatialLines, and SpatialLinesDataFrame), and spatial data frames from the sf package.
...	arguments to pass to addControl for addLegendSize, addLegendLine, addLegendSymbol, addLegendText, and addLegendTextSize
width	width in pixels of the lines
height	in pixels
dashArray	a string or vector/list of strings that defines the stroke dash pattern
label	a character vector of labels to display at the center of each symbol
text	character vector of labels to render inside each symbol. For addLegendText, length must match the number of unique values; if omitted the levels themselves are used. For addLegendTextSize, required and must be a single string, which is rendered at each break size.
labels	optional character vector of labels to display beside each text symbol in addLegendText; length must match the number of unique values. If NULL (the default) no labels are added and only the symbols are shown.
fontSize	size of the text in pixels for addLegendText; defaults to round(min(width, height) * 0.6)
fontFamily	optional font family for the svg text; if NULL the browser default is used

Value

an object from [addControl](#)

Examples

```

library(leaflet)
data("quakes")
quakes <- quakes[1:100,]
numPal <- colorNumeric('viridis', quakes$depth)
sizes <- sizeNumeric(quakes$depth, baseSize = 10)
symbols <- Map(
  makeSymbol,
  shape = 'triangle',
  color = numPal(quakes$depth),
  width = sizes,
  height = sizes
)
leaflet() %>%
  addTiles() %>%
  addMarkers(data = quakes,
             icon = icons(iconUrl = symbols),
             lat = ~lat, lng = ~long) %>%
  addLegendSize(
    values = quakes$depth,
    pal = numPal,
    title = 'Depth',
    labelStyle = 'margin: auto;',
    shape = c('triangle'),
    orientation = c('vertical', 'horizontal'),
    opacity = .7,
    breaks = 5)

# a wrapper for making icons is provided
sizeSymbols <-
makeSymbolsSize(
  quakes$depth,
  shape = 'cross',
  fillColor = numPal(quakes$depth),
  color = 'black',
  strokeWidth = 1,
  opacity = .8,
  fillOpacity = .5,
  baseSize = 20
)
leaflet() %>%
  addTiles() %>%
  addMarkers(data = quakes,
             icon = sizeSymbols,
             lat = ~lat, lng = ~long) %>%
  addLegendSize(
    values = quakes$depth,
    pal = numPal,
    title = 'Depth',
    shape = 'cross',
    orientation = 'horizontal',
    strokeWidth = 1,

```

```

    opacity = .8,
    fillOpacity = .5,
    color = 'black',
    baseSize = 20,
    breaks = 5)

# Group layers control
leaflet() %>%
  addTiles() %>%
  addLegendSize(
    values = quakes$depth,
    pal = numPal,
    title = 'Depth',
    labelStyle = 'margin: auto;',
    shape = c('triangle'),
    orientation = c('vertical', 'horizontal'),
    opacity = .7,
    breaks = 5,
    group = 'Depth') %>%
  addLayersControl(overlayGroups = c('Depth'))

# Polyline Legend for Size
baseSize <- 10
lineColor <- '#00000080'
pal <- colorNumeric('Reds', atlStorms2005$MinPress)
leaflet() %>%
  addTiles() %>%
  addPolylines(data = atlStorms2005,
    weight = ~sizeNumeric(values = MaxWind, baseSize = baseSize),
    color = ~pal(MinPress),
    popup = ~as.character(MaxWind)) %>%
  addLegendLine(values = atlStorms2005$MaxWind,
    title = 'MaxWind',
    baseSize = baseSize,
    width = 50,
    color = lineColor) %>%
  addLegendNumeric(pal = pal,
    title = 'MinPress',
    values = atlStorms2005$MinPress)

# Stacked Legends
leaflet(quakes) %>%
  addTiles() %>%
  addSymbolsSize(values = ~10^(mag),
    lat = ~lat,
    lng = ~long,
    shape = 'circle',
    color = 'black',
    fillColor = 'red',
    opacity = 1,
    baseSize = 5) %>%
  addLegendSize(
    values = ~10^(mag),

```

```

    title = 'Magnitude',
    baseSize = 5,
    shape = 'circle',
    color = 'black',
    fillColor = 'red',
    labelStyle = 'font-size: 18px;',
    position = 'bottomleft',
    stacked = TRUE,
    breaks = 5)

# Text legend (categorical)
quakes$grp <- sample(c('A', 'B', 'C'), nrow(quakes), replace = TRUE)
grpPal <- colorFactor('Dark2', quakes$grp)
leaflet(quakes) %>%
  addTiles() %>%
  addText(lng = ~long, lat = ~lat, text = ~grp,
          color = 'white', fillColor = ~grpPal(grp), width = 20) %>%
  addLegendText(pal = grpPal, values = ~grp, title = 'Group',
                labels = c('Group A', 'Group B', 'Group C'),
                position = 'topright', fontFamily = 'sans-serif')

# Text size legend (auto-computed font size)
leaflet(quakes) %>%
  addTiles() %>%
  addTextSize(lng = ~long, lat = ~lat,
              text = ~as.character(round(mag, 1)),
              values = ~mag, color = 'black', fillColor = 'yellow',
              baseSize = 30) %>%
  addLegendTextSize(pal = colorNumeric('viridis', quakes$mag),
                    values = ~mag, text = 'M', title = 'Magnitude',
                    baseSize = 30, breaks = 5,
                    position = 'bottomright')

# dashed lines
leaflet() %>%
  addTiles() %>%
  addLegendSymbol(color='black', dashArray = list("none", "24"),
                  shape = c("line", "line"), values = c('solid', 'dashed'),
                  strokeWidth = 10, height = 20, width = 100)

#advanced shape customization, aesthetic arguments are propagated if
# vectors are equal length or of size 1
defaultShapes <- availableShapes()[["default"]]
leaflet() %>%
  addTiles() %>%
  addLegendSymbol(
    shape = defaultShapes,
    color = "black",
    fillColor =
      colorRampPalette(c("blue", "yellow"))(length(defaultShapes)),
    width = seq(1L, length(defaultShapes), 1L) * length(defaultShapes),
    values = factor(defaultShapes, defaultShapes),
    strokeWidth = 2
  )

```

```
# label centered inside each legend symbol
leaflet() %>%
  addTiles() %>%
  addLegendSymbol(
    shape = c('circle', 'circle', 'circle'),
    color = 'black',
    fillColor = c('red', 'blue', 'green'),
    fillOpacity = 0.8,
    values = c('A', 'B', 'C'),
    label = c('A', 'B', 'C'),
    width = 24
  )
```

mapSymbols

Create Map Symbols for 'leaflet' maps

Description

Create Map Symbols for 'leaflet' maps

Usage

```
makeSymbol(
  shape,
  width,
  height = width,
  color,
  fillColor = color,
  opacity = 1,
  fillOpacity = opacity,
  label = NULL,
  ...
)

makeSvgUri(svg, width, height, strokeWidth)

makeSymbolIcons(
  shape,
  color,
  fillColor = color,
  opacity,
  fillOpacity = opacity,
  strokeWidth = 1,
  width,
  height = width,
  label = NULL,
  ...
)
```

```
)

makeSymbolText(
  text,
  width,
  height = width,
  color = "black",
  fillColor = color,
  opacity = 1,
  fillOpacity = opacity,
  fontSize = round(min(width, height) * 0.6),
  fontFamily = NULL,
  ...
)

makeSymbolTextIcons(
  text,
  color = "black",
  fillColor = color,
  opacity = 1,
  fillOpacity = opacity,
  strokeWidth = 0,
  width,
  height = width,
  fontFamily = NULL,
  ...
)

addSymbols(
  map,
  lng,
  lat,
  values,
  shape,
  color,
  fillColor = color,
  opacity = 1,
  fillOpacity = opacity,
  strokeWidth = 1,
  width = 20,
  height = width,
  dashArray = NULL,
  label = NULL,
  data = leaflet::getMapData(map),
  ...
)

addSymbolsSize(
```

```
    map,  
    lng,  
    lat,  
    values,  
    shape,  
    color,  
    fillColor = color,  
    opacity = 1,  
    fillOpacity = opacity,  
    strokeWidth = 1,  
    baseSize = 20,  
    minSize = NULL,  
    maxSize = NULL,  
    data = leaflet::getMapData(map),  
    ...  
  )  
  
  addText(  
    map,  
    lng,  
    lat,  
    text,  
    color = "black",  
    fillColor = color,  
    opacity = 1,  
    fillOpacity = opacity,  
    strokeWidth = 0,  
    width = 20,  
    height = width,  
    data = leaflet::getMapData(map),  
    ...  
  )  
  
  addTextSize(  
    map,  
    lng,  
    lat,  
    values,  
    text,  
    color = "black",  
    fillColor = color,  
    opacity = 1,  
    fillOpacity = opacity,  
    strokeWidth = 0,  
    baseSize = 20,  
    data = leaflet::getMapData(map),  
    ...  
  )
```

```

sizeNumeric(
  values,
  baseSize,
  minSize = NULL,
  maxSize = NULL,
  centerPoint = mean(values, na.rm = TRUE)
)

sizeBreaks(values, breaks, baseSize, minSize = NULL, maxSize = NULL, ...)

makeSymbolsSize(
  values,
  shape = "rect",
  color,
  fillColor,
  opacity = 1,
  fillOpacity = opacity,
  strokeWidth = 1,
  baseSize,
  minSize = NULL,
  maxSize = NULL,
  ...
)

```

Arguments

shape	the desired shape of the symbol, See availableShapes
width	in pixels
height	in pixels
color	stroke color
fillColor	fill color
opacity	stroke opacity
fillOpacity	fill opacity
label	a character vector of labels to display at the center of each symbol
...	arguments to pass to svg shape tag for makeSymbol, makeSymbolIcons, makeSymbolsSize svg text tag for makeSymbolText, makeSymbolTextIcons addMarkers for addSymbols, addSymbolsSize, addText, addTextSize pretty for sizeBreaks
svg	inner svg tags for symbol
strokeWidth	stroke width in pixels
text	character string to render inside the svg
fontSize	size of the text in pixels; defaults to round(min(width, height) * 0.6)

fontFamily	optional font family for the svg text; if NULL the browser default is used
map	a map widget object created from 'leaflet'
lng	a numeric vector of longitudes, or a one-sided formula of the form $\sim x$ where x is a variable in data; by default (if not explicitly provided), it will be automatically inferred from data by looking for a column named lng, long, or longitude (case-insensitively)
lat	a vector of latitudes or a formula (similar to the lng argument; the names lat and latitude are used when guessing the latitude column from data)
values	the values used to generate shapes; can be omitted for a single type of shape
dashArray	a string or vector/list of strings that defines the stroke dash pattern
data	the data object from which the argument values are derived; by default, it is the data object provided to leaflet() initially, but can be overridden
baseSize	re-scaling size in pixels of the mean of the values, the average value will be this exact size
minSize	minimum size in pixels of a symbol; values that would scale below this are clamped to minSize; baseSize must be greater than minSize
maxSize	maximum size in pixels of a symbol; values that would scale above this are clamped to maxSize; baseSize must be less than maxSize
centerPoint	the value used as the center of the scaling; defaults to the mean of values; the symbol for centerPoint will be exactly baseSize pixels
breaks	an integer specifying the number of breaks or a numeric vector of the breaks; if a named vector then the names are used as labels.

Value

HTML svg element

Examples

```
library(leaflet)
data(quakes)

# symbol with a label centered inside
makeSymbol('circle', width = 24, color = 'black', fillColor = 'steelblue',
           fillOpacity = 0.8, label = 'A')

# map markers with per-point labels
quakes$label <- as.character(seq_len(nrow(quakes)))
leaflet(quakes[1:20, ]) %>%
  addTiles() %>%
  addSymbols(lat = ~lat, lng = ~long, color = 'black',
            fillColor = 'steelblue', fillOpacity = 0.8,
            label = ~label)

library(leaflet)
data(quakes)
```

```
quakes1 <- quakes[1:10,]

# makeSymbolText returns a single SVG data URI
makeSymbolText(text = 'A', width = 30, color = 'red')

# makeSymbolTextIcons builds a vector of icons
iconSet <- makeSymbolTextIcons(text = LETTERS[1:nrow(quakes1)],
                              width = 30, color = 'white',
                              fillColor = 'navy')

leaflet(quakes1) %>%
  addTiles() %>%
  addMarkers(lng = ~long, lat = ~lat, icon = iconSet)

# addText draws text labels at each location
leaflet(quakes1) %>%
  addTiles() %>%
  addText(lng = ~long, lat = ~lat,
          text = ~as.character(seq_len(nrow(quakes1))),
          color = 'white', fillColor = 'red', width = 30)

# addTextSize scales text by a numeric variable
leaflet(quakes1) %>%
  addTiles() %>%
  addTextSize(lng = ~long, lat = ~lat,
              text = ~as.character(round(mag, 1)),
              values = ~mag, color = 'black', fillColor = 'yellow',
              baseSize = 30)
```

Index

`addControl`, [5](#), [8](#), [10](#), [15](#)
`addLeafLegends`, [2](#)
`addLegendAwesomeIcon`, [8](#)
`addLegendBin` (`addLeafLegends`), [2](#)
`addLegendFactor` (`addLeafLegends`), [2](#)
`addLegendImage`, [9](#)
`addLegendLine` (`legendSymbols`), [12](#)
`addLegendNumeric` (`addLeafLegends`), [2](#)
`addLegendQuantile` (`addLeafLegends`), [2](#)
`addLegendSize` (`legendSymbols`), [12](#)
`addLegendSymbol` (`legendSymbols`), [12](#)
`addLegendText` (`legendSymbols`), [12](#)
`addLegendTextSize` (`legendSymbols`), [12](#)
`addMarkers`, [22](#)
`addSymbols` (`mapSymbols`), [19](#)
`addSymbolsSize` (`mapSymbols`), [19](#)
`addText` (`mapSymbols`), [19](#)
`addTextSize` (`mapSymbols`), [19](#)
`availableShapes`, [4](#), [11](#), [14](#), [22](#)
`awesomeIconList`, [8](#)

`colorNumeric`, [4](#), [14](#)

`legendSymbols`, [12](#)

`makeSvgUri` (`mapSymbols`), [19](#)
`makeSymbol` (`mapSymbols`), [19](#)
`makeSymbolIcons` (`mapSymbols`), [19](#)
`makeSymbolsSize` (`mapSymbols`), [19](#)
`makeSymbolText` (`mapSymbols`), [19](#)
`makeSymbolTextIcons` (`mapSymbols`), [19](#)
`mapSymbols`, [19](#)

`pretty`, [22](#)

`sizeBreaks` (`mapSymbols`), [19](#)
`sizeNumeric` (`mapSymbols`), [19](#)