

Package ‘swipeR’

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Type Package

Title Carousels using the 'JavaScript' Library 'Swiper'

Version 1.1.0

Description Create carousels using the 'JavaScript' library 'Swiper' and the package 'htmlwidgets'. The carousels can be displayed in the 'RStudio' viewer pane, in 'Shiny' applications and in 'R markdown' documents. The package also provides a 'RStudio' addin allowing to choose image files and to display them in the viewer pane.

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URL <https://github.com/stla/swipeR>

BugReports <https://github.com/stla/swipeR/issues>

Imports base64enc, htmltools, htmlwidgets, rChoiceDialogs, tools

Suggests ggplot2, ggthemes, shiny, shinyWidgets

Encoding UTF-8

RoxygenNote 7.2.3

NeedsCompilation no

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`swipeR`*HTML widget displaying a carousel*

Description

Create a HTML widget displaying a carousel.

Usage

```
swipeR(  
  wrapper,  
  width = "100%",  
  height = "100%",  
  navigationColor = "white",  
  paginationColor = "white",  
  bulletsSize = "8px",  
  id = NULL,  
  direction = "horizontal",  
  effect = "slide",  
  cubeEffect = list(shadow = TRUE, slidesShadow = TRUE, shadowOffset = 20, shadowScale =  
    0.94),  
  initialSlide = 1,  
  keyboard = list(enabled = FALSE, onlyInViewport = TRUE, pageUpDown = TRUE),  
  zoom = FALSE,  
  loop = FALSE,  
  rewind = FALSE,  
  slidesPerView = 1,  
  spaceBetween = 30,  
  speed = 300,  
  scrollbar = FALSE,  
  autoplay = FALSE,  
  thumbs = FALSE,  
  thumbsPerView = 2,  
  thumbsHeight = "60px",  
  on = NULL,  
  elementId = NULL  
)
```

Arguments

<code>wrapper</code>	HTML div element created with swipeRwrapper
<code>width, height</code>	dimensions
<code>navigationColor</code>	color for the navigation arrows
<code>paginationColor</code>	color for the pagination bullets

bulletsSize	size of the pagination bullets
id	a HTML id for the carousel
direction	direction of the slide show, "horizontal" or "vertical"
effect	transition effect, can be "slide", "fade", "cube", "coverflow", "flip", or "cards"
cubeEffect	list of settings for the cube when effect="cube"
initialSlide	index of the first slide to be shown
keyboard	named list of settings for the keyboard navigation, or just TRUE to enable the keyboard navigation with the default options, or FALSE to disable the keyboard navigation
zoom	Boolean, whether to enable the zoom on slide's double tap; all zoomable slides must be wrapped in a div with swiper-zoom-container class
loop	Boolean, whether to enable the continuous loop mode
rewind	Boolean; if TRUE, clicking "next" navigation button when on last slide will slide back to the first slide, and clicking "prev" navigation button when on first slide will style forward to the last slide
slidesPerView	number of slides per view
spaceBetween	distance between slides in pixels
speed	transition speed in milliseconds
scrollbar	Boolean, whether to enable a scrollbar for navigation
autoplay	Boolean, whether to autoplay the slide show
thumbs	Boolean, whether to display thumbs of the slides
thumbsPerView	number of thumbs per view
thumbsHeight	height of the thumbs carousel
on	named list of event listeners
elementId	a HTML id for the container

Value

A htmlwidget object.

Examples

```
library(swipeR)
library(htmltools)

wrapper <- swipeRwrapper(
  tags$img(src = "https://swiperjs.com/demos/images/nature-1.jpg"),
  tags$img(src = "https://swiperjs.com/demos/images/nature-2.jpg"),
  tags$img(src = "https://swiperjs.com/demos/images/nature-3.jpg"),
  tags$img(src = "https://swiperjs.com/demos/images/nature-4.jpg"),
  tags$img(src = "https://swiperjs.com/demos/images/nature-5.jpg"),
  tags$img(src = "https://swiperjs.com/demos/images/nature-6.jpg"),
  tags$img(src = "https://swiperjs.com/demos/images/nature-7.jpg"),
```

```

tags$img(src = "https://swiperjs.com/demos/images/nature-8.jpg")
)

swipeR(
  wrapper, height = "400px", width = "70%", thumbs = TRUE, keyboard = TRUE,
  on = list(reachEnd = htmlwidgets::JS("function() {alert('the end');}"))
)

# Shiny example ####
library(swipeR)
library(shiny)
library(ggplot2)

wrapper <- swipeRwrapper(
  div(
    plotOutput("ggplot1", width = "500px", height = "400px"),
    align = "center"
  ),
  div(
    plotOutput("ggplot2", width = "500px", height = "400px"),
    align = "center"
  ),
  div(
    plotOutput("ggplot3", width = "500px", height = "400px"),
    align = "center"
  ),
  div(
    plotOutput("ggplot4", width = "500px", height = "400px"),
    align = "center"
  )
)

ui <- fluidPage(
  tags$head(
    tags$style(HTML(
      ".shiny-plot-output {border: 2px solid royalblue;}")
    ))
  ),
  br(),
  fluidRow(
    column(
      12,
      swipeR(
        wrapper, height = "450px", width = "80%", effect = "cube", speed = 2000,
        navigationColor = "black", rewind = TRUE, id = "CAROUSEL"
      )
    ),
    column(
      12,
      br(), br(), br(),
    ),
    column(
      3, align = "center",

```

```

    actionButton(
      "btn1", "Scatter plot", class = "btn-primary",
      onclick = "document.getElementById('CAROUSEL').swiper.slideTo(0);"
    )
  ),
  column(
    3, align = "center",
    actionButton(
      "btn2", "Line chart", class = "btn-primary",
      onclick = "document.getElementById('CAROUSEL').swiper.slideTo(1);"
    )
  ),
  column(
    3, align = "center",
    actionButton(
      "btn3", "Bar chart", class = "btn-primary",
      onclick = "document.getElementById('CAROUSEL').swiper.slideTo(2);"
    )
  ),
  column(
    3, align = "center",
    actionButton(
      "btn4", "Boxplots", class = "btn-primary",
      onclick = "document.getElementById('CAROUSEL').swiper.slideTo(3);"
    )
  )
)
)
)

server <- function(input, output, session) {
  output[["ggplot1"]] <- renderPlot({
    ggplot(mtcars, aes(wt, mpg)) + geom_point() +
      theme(panel.border = element_rect(fill = NA, color = "firebrick"))
  }, width = 500, height = 400)
  output[["ggplot2"]] <- renderPlot({
    ggplot(economics, aes(date, unemploy)) + geom_line()
  }, width = 500, height = 400)
  output[["ggplot3"]] <- renderPlot({
    ggplot(mpg, aes(class)) + geom_bar()
  }, width = 500, height = 400)
  output[["ggplot4"]] <- renderPlot({
    ggplot(mpg, aes(class, hwy)) + geom_boxplot()
  }, width = 500, height = 400)
}

if(interactive()) shinyApp(ui, server)

# other Shiny example ####
library(swipeR)
library(shiny)
library(shinyWidgets)
library(ggplot2)

```

```

library(ggthemes)

wrapper <- swipeRwrapper(
  div(
    fluidRow(
      column(
        6,
        awesomeRadio(
          "theme", "Choose a theme",
          c(
            "Calc",
            "Clean",
            "Economist",
            "Excel",
            "FiveThirtyEight",
            "Foundation",
            "Google Docs",
            "Highcharts",
            "Pander",
            "Solarized",
            "Stata",
            "Wall Street"
          )
        )
      ),
      column(
        6,
        tags$p("The Shiny slider does not work here..."),
        tags$label("Base font size"),
        tags$input(
          type = "range", min = "10", max = "20", value = "12",
          oninput =
            "this.nextElementSibling.value = this.value;
            Shiny.setInputValue('slider', this.value);"
        ),
        tags$output("12", style = "font-weight: bold; color: blue"),
        br(), hr(), br(),
        materialSwitch("facets", "Facets?", status = "info"),
        conditionalPanel(
          condition = "input.facets",
          awesomeRadio(
            "direction", label = NULL, status = "info",
            choices = c("by row" = "row", "by column" = "column"),
          )
        ),
        br(), hr(), br(),
        actionButton(
          "btn", "Add slide", class = "btn-primary btn-block",
          onclick = "document.getElementById('SWIPER').swiper.appendSlide(
            '<div class=\"swiper-slide rlogo\"></div>');
            Shiny.setInputValue('newslide', true, {priority: 'event'});"
        )
      )
    )
  )
)

```

```

    ),
    style = "margin-left: 10%; margin-right: 10%; font-size: 2rem;"
  ),
  div(
    plotOutput("ggplot", width = "85%", height = "400px"),
    align = "center"
  )
)

ui <- fluidPage(
  tags$head(
    tags$style(HTML(
      ".shiny-plot-output {
        border: 2px solid royalblue;
      }
      .shiny-text-output {
        font-size: 30px;
        font-style: italic;
      }
      .recalculating {
        display: none; /* otherwise there's a flash */
      }
      .rlogo {
        width: 100%;
        height: 100%;
        background-image: url(https://www.r-project.org/logo/Rlogo.png);
        background-repeat: no-repeat;
        background-size: contain;
        background-position: center;
      }"
    ))
  ),
  br(), br(), br(),
  fluidRow(
    column(
      12,
      swipeR(
        wrapper, id = "SWIPER", effect = "flip", rewind = TRUE,
        height = "450px", width = "90%",
        navigationColor = "black", paginationColor = "black",
        on = list(
          afterInit = htmlwidgets::JS(
            "function(swiper) {
              setTimeout(function(){ Shiny.setInputValue('index', 1); }, 0);
            }"
          ),
          slideChange = htmlwidgets::JS(
            "function(swiper) {
              Shiny.setInputValue('index', swiper.activeIndex + 1);
            }"
          )
        )
      )
    )
  )
)

```

```

    ),
    column(
      12,
      textOutput("slideIndex")
    )
  )
)

server <- function(input, output, session) {

  ggtheme <- reactive({
    size <- input[["slider"]]
    size <- if(is.null(size)) 12 else as.integer(size)
    switch(
      input[["theme"]],
      "Calc"           = theme_calc(base_size = size),
      "Clean"          = theme_clean(base_size = size),
      "Economist"      = theme_economist(base_size = size),
      "Excel"          = theme_excel_new(base_size = size),
      "FiveThirtyEight" = theme_fivethirtyeight(base_size = size),
      "Foundation"     = theme_foundation(base_size = size),
      "Google Docs"    = theme_gdocs(base_size = size),
      "Highcharts"     = theme_hc(base_size = size),
      "Pander"         = theme_pander(base_size = size),
      "Solarized"      = theme_solarized(base_size = size),
      "Stata"          = theme_stata(base_size = size),
      "Wall Street"    = theme_wsj(base_size = size)
    )
  })

  output[["ggplot"]] <- renderPlot({
    gg <- ggplot(iris, aes(x = Sepal.Length, y = Petal.Length, color = Species)) +
      geom_point(size = 6) + ggtheme()
    if(input[["facets"]]) {
      if(input[["direction"]] == "row") {
        gg <- gg + facet_grid(rows = vars(Species))
      } else {
        gg <- gg + facet_grid(cols = vars(Species))
      }
    }
    gg
  })

  nSlides <- reactiveVal(2)
  observeEvent(input[["newslide"]], {
    nSlides(nSlides() + 1)
  })

  output[["slideIndex"]] <- renderText({
    paste0(input[["index"]], "/", nSlides())
  })
}

```

```
if(interactive()) shinyApp(ui, server)
```

swipeR-shiny

Shiny bindings for swipeR carousels

Description

Output and render functions for using swipeR within Shiny applications.

Usage

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

```
renderSwipeR(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 swipeR carousel
env	the environment in which to evaluate expr
quoted	Boolean, whether expr is a quoted expression (with <code>quote()</code>); this is useful if you want to save an expression in a variable

Value

swipeROutput returns an output element that can be included in a Shiny UI, and renderSwipeR returns a `shiny.render.function` object that can be assigned to an output slot in a Shiny server.

swipeRwrapper

List of DOM elements for a carousel

Description

Enclose a list of DOM elements in a HTML div element to be passed to the [swipeR](#) function.

Usage

```
swipeRwrapper(...)
```

Arguments

...	HTML elements, one for each slide
-----	-----------------------------------

Value

A shiny.tag object.

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