

Package ‘slideview’

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Title Compare Raster Images Side by Side with a Slider

Version 0.2.1

Maintainer Tim Appelhans <tim.appelhans@gmail.com>

Description Create a side-by-side view of raster(image)s with an interactive slider to switch between regions of the images. This can be especially useful for image comparison of the same region at different time stamps.

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Encoding UTF-8

Depends R (>= 2.10), methods

Imports htmltools, htmlwidgets, lattice, raster, terra, viridisLite

Suggests jpeg

RoxygenNote 7.3.2

URL <https://r-spatial.github.io/slideview/>,
<https://github.com/r-spatial/slideview>

BugReports <https://github.com/r-spatial/slideview/issues>

NeedsCompilation no

Author Tim Appelhans [cre, aut],
Stefan Woellauer [aut]

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slideView

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Description

Two images are overlaid and a slider is provided to interactively compare the two images in a before-after like fashion. `img1` and `img2` can either be two `RasterLayers`, two `RasterBricks/Stacks` or two character strings. In the latter case it is assumed that these point to .png images on the disk.

NOTE: In case you want to include multiple slideviews in one page in a Rmd or flexdashboard we highly recommend using package `widgetframe`. Also, make sure to use different image names and/or labels for each of the `RasterLayers/Bricks/Stacks`. Otherwise things will likely not work properly.

This is a modified implementation of <http://bl.ocks.org/rfriberg/8327361>

Usage

```
## S4 method for signature 'SpatRaster,SpatRaster'
slideView(
  img1,
  img2,
  label1 = deparse(substitute(img1, env = parent.frame())),
  label2 = deparse(substitute(img2, env = parent.frame())),
  r = 1,
  g = 2,
  b = 3,
  col.regions = viridisLite::inferno(256),
  legend = TRUE,
  na.color = "#BEBEBE",
  maxpixels = 1e+07,
  sliderInfoCSS = list(),
  ...
)

## S4 method for signature 'Raster,Raster'
slideView(
  img1,
  img2,
  label1 = deparse(substitute(img1, env = parent.frame())),
  label2 = deparse(substitute(img2, env = parent.frame())),
  ...
)

## S4 method for signature 'RasterStackBrick,RasterStackBrick'
slideView(
  img1,
  img2,
```

```

    label1 = deparse(substitute(img1, env = parent.frame())),
    label2 = deparse(substitute(img2, env = parent.frame())),
    ...
)

## S4 method for signature 'Raster,RasterStackBrick'
slideView(
  img1,
  img2,
  label1 = deparse(substitute(img1, env = parent.frame())),
  label2 = deparse(substitute(img2, env = parent.frame())),
  ...
)

## S4 method for signature 'RasterStackBrick,Raster'
slideView(
  img1,
  img2,
  label1 = deparse(substitute(img1, env = parent.frame())),
  label2 = deparse(substitute(img2, env = parent.frame())),
  ...
)

## S4 method for signature 'character,character'
slideView(
  img1,
  img2,
  label1 = deparse(substitute(img1, env = parent.frame())),
  label2 = deparse(substitute(img2, env = parent.frame())),
  sliderInfoCSS = list()
)

## S4 method for signature 'ANY'
slideview(...)

```

Arguments

img1	a RasterStack/Brick, RasterLayer or path to a .png file
img2	a RasterStack/Brick, RasterLayer or path to a .png file
label1	slider label for img1 (defaults to object name)
label2	slider label for img2 (defaults to object name)
r	integer. Index of the Red channel, between 1 and nlayers(x)
g	integer. Index of the Green channel, between 1 and nlayers(x)
b	integer. Index of the Blue channel, between 1 and nlayers(x)
col.regions	color (palette). See levelplot for details.
legend	whether to plot legends for the two images (ignored for RasterStacks/*Bricks).

<code>na.color</code>	the color to be used for NA pixels
<code>maxpixels</code>	integer > 0. Maximum number of cells to use for the plot. If <code>maxpixels < ncell(x)</code> , <code>sampleRegular</code> is used before plotting.
<code>sliderInfoCSS</code>	list of valid css key-value pairs for the slider info at the top of the window.
<code>...</code>	additional arguments passed on to respective functions.
<code>color</code>	the color palette to be used for visualising <code>RasterLayers</code>

Details

Compare two images trough interactive swiping overlay

For `slideView` a few keyboard shortcuts are defined:

- space - toggle antialiasing
- esc - zoom to layer extent
- enter - set zoom to 1
- ctrl - increase panning speed by 10

Methods (by class)

- `slideView(img1 = Raster, img2 = Raster)`: for `RasterLayers`
- `slideView(img1 = RasterStackBrick, img2 = RasterStackBrick)`: for `RasterStackBrick`, `RasterStackBrick`
- `slideView(img1 = Raster, img2 = RasterStackBrick)`: for `RasterLayer`, `RasterStackBrick`
- `slideView(img1 = RasterStackBrick, img2 = Raster)`: for `RasterStackBrick`, `RasterLayer`
- `slideView(img1 = character, img2 = character)`: for png files
- `slideview(ANY)`: alias for ease of typing

Author(s)

Tim Appelhans

Stephan Woellauer

Examples

```
if (interactive()) {
  ### example taken from
  ### http://www.news.com.au/technology/environment/nasa-images-reveal-
  ### aral-sea-is-shrinking-before-our-eyes/story-e6frflp0-1227074133835

  library(jpeg)
  library(terra)

  web_img2000 <- "http://cdn.newsapi.com.au/image/v1/68565a36c0fccb1bc43c09d96e8fb029"

  jpg2000 <- readJPEG(readBin(web_img2000, "raw", 1e6))
}
```

```
img2000 <- rast(jpg2000)

web_img2013 <- "http://cdn.newsapi.com.au/image/v1/5707499d769db4b8ec76e8df61933f2a"

jpg2013 <- readJPEG(readBin(web_img2013, "raw", 1e6))

img2013 <- rast(jpg2013)

slideView(img2000, img2013, label1 = "before", label2 = "after", legend = FALSE)

## adjust layout of the info slider
slideView(
  img2000
  , img2013
  , sliderInfoCSS = list(
    "background-color" = "#00ffff"
    , "color" = "#ff00ff"
    , opacity = 0.8
    , "font-size" = "30px"
    , "font-family" = "courier"
  )
  , legend = FALSE
)
}
```

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