

Package ‘magickGUI’

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Type Package

Title GUI Tools for Interactive Image Processing with 'magick'

Version 1.2.0

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Description Enables us to use the functions of the package 'magick' interactively.

License GPL-3

Depends R (>= 3.1.2), magick (>= 2.2)

Imports tcltk

Suggests testthat (>= 2.0.0), knitr, rmarkdown

URL <https://github.com/ShotaOchi/magickGUI>

BugReports <https://github.com/ShotaOchi/magickGUI/issues>

NeedsCompilation no

SystemRequirements ImageMagick (>= 6.9.5.4)

RoxygenNote 7.1.0

Encoding UTF-8

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Repository CRAN

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interactive_annotate	<i>interactive annotation</i>
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Description

Using image_annotate of 'magick' interactively. location, degrees, size, weight, and kerning are parameters of image_annotate. See reference manual of 'magick' for detail.

Usage

```
interactive_annotate(  
  image,  
  text,  
  gravity = "northwest",  
  font = "",  
  style = "normal",  
  decoration = NULL,  
  color = NULL,  
  strokecolor = NULL,  
  boxcolor = NULL,  
  range_max_size = 1000,  
  range_max_weight = 850,  
  range_max_kerning = 300,  
  resolution = 0.1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
text	character vector of length equal to 'image' or length 1
gravity	string with gravity value from gravity_types.
font	string with font family such as "sans", "mono", "serif", "Times", "Helvetica", "Trebuchet", "Georgia", "Palatino" or "Comic Sans".
style	value of style_types for example "italic"
decoration	value of decoration_types for example "underline"

color	a valid color string such as "navyblue" or "#000080". Use "none" for transparency.
strokecolor	a color string adds a stroke (border around the text)
boxcolor	a color string for background color that annotation text is rendered on.
range_max_size	define maximum of size in slider. must be positive.
range_max_weight	define maximum of weight in slider. must be positive.
range_max_kerning	define maximum of kerning in slider. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns a list of values of location, degrees, size, weight, and kerning. If return_param is FALSE, returns a magick image object.

Value

a magick image object or a list of values of location, degrees, size, weight, and kerning

Author(s)

Shota Ochi

Examples

```
interactive_annotate(wizard, "hello")
```

interactive_blur	<i>interactive blurring</i>
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Description

Using image_blur of 'magick' interactively. radius and sigma are parameters of image_blur. See reference manual of 'magick' for detail.

Usage

```
interactive_blur(
  image,
  range_max_radius = 5,
  range_max_sigma = 5,
  resolution = 0.1,
  return_param = FALSE
)
```

Arguments

image	a magick image object
range_max_radius	define maximum in slider of radius. must be positive.
range_max_sigma	define maximum in slider of sigma. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns values of radius and sigma. If return_param is FALSE, returns a magick image object.

Value

a magick image object or values of radius and sigma

Author(s)

Shota Ochi

Examples

```
interactive_blur(wizard)
```

interactive_canny	<i>interactive canny edge detection</i>
-------------------	---

Description

Using image_canny of 'magick' interactively. radius, sigma, lower%, and upper% are parameters of image_canny. See reference manual of 'magick' for detail.

Usage

```
interactive_canny(
  image,
  range_max_radius = 30,
  range_max_sigma = 2,
  resolution = 0.1,
  return_param = FALSE
)
```

Arguments

image	a magick image object
range_max_radius	define maximum in slider of radius. must be positive.
range_max_sigma	define maximum in slider of sigma. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns values of radius, sigma, lower%, and upper% represented in the format of 'magick'. If return_param is FALSE, returns a magick image object.

Value

a magick image object or values of radius, sigma, lower%, and upper% represented in the format of 'magick'

Author(s)

Shota Ochi

Examples

```
interactive_canny(wizard)
```

```
interactive_charcoal  interactive charcoal filtering
```

Description

Using image_charcoal of 'magick' interactively. radius and sigma are parameters of image_charcoal. See reference manual of 'magick' for detail.

Usage

```
interactive_charcoal(
  image,
  range_max_radius = 5,
  range_max_sigma = 5,
  resolution = 0.1,
  return_param = FALSE
)
```

Arguments

image	a magick image object
range_max_radius	define maximum in slider of radius. must be positive.
range_max_sigma	define maximum in slider of sigma. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns values of radius and sigma. If return_param is FALSE, returns a magick image object.

Value

a magick image object or values of radius and sigma

Author(s)

Shota Ochi

Examples

```
interactive_charcoal(wizard)
```

interactive_composite *interactive image compositing*

Description

Using image_composite of 'magick' interactively. operator, compose_args, and offset are parameters of image_composite. see reference manual of 'magick' for detail.

Usage

```
interactive_composite(  
  image,  
  composite_image,  
  operator = "atop",  
  compose_args = "",  
  resolution = 1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
composite_image	composition image
operator	string with a composite operator
compose_args	additional arguments needed for some composite operations
resolution	resolution of slider
return_param	If return_param is TRUE, returns values of offset. If return_param is FALSE, returns a magick image object.

Value

magick a image object or values of offset

Author(s)

Shota Ochi

Examples

```
interactive_composite(wizard, rose)
```

interactive_crop	<i>interactive cropping</i>
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Description

Using image_crop of 'magick' interactively.

Usage

```
interactive_crop(image, color = "white", return_param = FALSE)
```

Arguments

image	a magick image object
color	color of background. a valid color string such as "navyblue" or "#000080". "none" is not allowed.
return_param	If return_param is TRUE, returns a value of geometry. If return_param is FALSE, returns a magick image object.

Value

a magick image object or a value of geometry.

Author(s)

Shota Ochi

Examples

```
interactive_crop(wizard)
```

```
interactive_despeckle  interactive despeckling
```

Description

Using image_despeckle of 'magick' interactively. times is a parameter of image_despeckle. See reference manual of 'magick' for detail.

Usage

```
interactive_despeckle(  
  image,  
  range_max = 50,  
  resolution = 1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
range_max	define maximum in slider. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns value of times. If return_param is FALSE, returns a magick image object.

Value

a magick image object or value of times

Author(s)

Shota Ochi

Examples

```
interactive_despeckle(wizard)
```

interactive_emboss	<i>interactive embossing</i>
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Description

Using image_emboss of 'magick' interactively. radius and sigma are parameters of image_emboss. See reference manual of 'magick' for detail.

Usage

```
interactive_emboss(  
  image,  
  range_max_radius = 5,  
  range_max_sigma = 5,  
  resolution = 0.1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
range_max_radius	define maximum in slider of radius. must be positive.
range_max_sigma	define maximum in slider of sigma. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns values of radius and sigma. If return_param is FALSE, returns a magick image object.

Value

a magick image object or values of radius and sigma

Author(s)

Shota Ochi

Examples

```
interactive_emboss(wizard)
```

interactive_fill	<i>interactive filling</i>
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Description

Using image_fill of 'magick' interactively. point and fuzz are parameters of image_fill. See reference manual of 'magick' for detail.

Usage

```
interactive_fill(  
  image,  
  color,  
  refcolor = NULL,  
  resolution = 0.1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
color	a valid color string such as "navyblue" or "#000080". Use "none" for transparency.
refcolor	if set, fuzz color distance will be measured against this color, not the color of the starting point. Any color (within fuzz color distance of the given refcolor), connected to starting point will be replaced with the color. If the pixel at the starting point does not itself match the given refcolor (according to fuzz) then no action will be taken.
resolution	resolution of slider of fuzz
return_param	If return_param is TRUE, returns a list values of point and fuzz. If return_param is FALSE, returns a magick image object.

Value

a magick image object or a list of values of point and fuzz

Author(s)

Shota Ochi

Examples

```
interactive_fill(wizard, "black")
```

interactive_implode	<i>interactive imploding</i>
---------------------	------------------------------

Description

Using image_implode of 'magick' interactively. factor is a parameter of image_implode. See reference manual of 'magick' for detail.

Usage

```
interactive_implode(  
  image,  
  range_max = 1,  
  resolution = 0.1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
range_max	define maximum in slider. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns value of factor. If return_param is FALSE, returns a magick image object.

Value

a magick image object or value of factor

Author(s)

Shota Ochi

Examples

```
interactive_implode(wizard)
```

interactive_modulate *interactive modulating*

Description

Using image_modulate of 'magick' interactively. brightness and saturation and hue are parameters of image_modulate. See reference manual of 'magick' for detail.

Usage

```
interactive_modulate(  
  image,  
  range_max_brightness = 200,  
  range_max_saturation = 200,  
  range_max_hue = 200,  
  resolution = 0.1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
range_max_brightness	define maximum in slider of brightness. must be positive.
range_max_saturation	define maximum in slider of saturation. must be positive.
range_max_hue	define maximum in slider of hue. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns values of brightness and saturation and hue. If return_param is FALSE, returns a magick image object.

Value

a magick image object or values of brightness and saturation

Author(s)

Shota Ochi

Examples

```
interactive_modulate(wizard)
```

interactive_oilpaint *interactive oil painting*

Description

Using image_oilpaint of 'magick' interactively. radius is a parameter of image_oilpaint. See reference manual of 'magick' for detail.

Usage

```
interactive_oilpaint(  
  image,  
  range_max = 10,  
  resolution = 0.1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
range_max	define maximum in slider. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns value of radius. If return_param is FALSE, returns a magick image object.

Value

a magick image object or value of radius

Author(s)

Shota Ochi

Examples

```
interactive_oilpaint(wizard)
```

interactive_quantize *interactive quantization*

Description

Using image_quantize of 'magick' interactively. max, colorspace, dither, and treedepth are parameters of image_quantize. See reference manual of 'magick' for detail.

Usage

```
interactive_quantize(  
  image,  
  colorspace = "rgb",  
  dither = NULL,  
  treedepth = NULL,  
  range_max = 256,  
  resolution = 1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
colorspace	specify colorspace. for example, "rgb", "gray", or "cmyk".
dither	apply Floyd/Steinberg error diffusion to the image
treedepth	depth of the quantization color classification tree
range_max	define maximum in slider. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns value of max. If return_param is FALSE, returns a magick image object.

Value

a magick image object or value of max

Author(s)

Shota Ochi

Examples

```
interactive_quantize(wizard)
```

interactive_reducenoise
interactive denoising

Description

Using image_reducenoise of 'magick' interactively. radius is a parameter of image_reducenoise. See reference manual of 'magick' for detail.

Usage

```
interactive_reducenoise(  
  image,  
  range_max = 30,  
  resolution = 1,  
  return_param = FALSE  
)
```

Arguments

image	a magick image object
range_max	define maximum in slider. must be positive.
resolution	resolution of slider
return_param	If return_param is TRUE, returns value of radius. If return_param is FALSE, returns a magick image object.

Value

a magick image object or value of radius

Author(s)

Shota Ochi

Examples

```
interactive_reducenoise(wizard)
```

interactive_threshold *interactive thresholding*

Description

Using image_threshold of 'magick' interactively. type and channel are parameters of image_threshold. See reference manual of 'magick' for detail.

Usage

```
interactive_threshold(
  image,
  type = c("black", "white"),
  channel = NULL,
  resolution = 0.1,
  return_param = FALSE
)
```

Arguments

image	a magick image object
type	type of thresholding, either one of lat, black or white
channel	a value specifying which channel(s) to set
resolution	resolution of slider
return_param	If return_param is TRUE, returns threshold value. If return_param is FALSE, returns a magick image object.

Value

a magick image object or threshold value

Author(s)

Shota Ochi

Examples

```
interactive_threshold(wizard)
```

magickGUI

magickGUI: GUI tools for interactive image processing with 'magick'

Description

magickGUI enables us to use the functions of the package 'magick' interactively.

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