

# Package ‘magickGUI’

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**Type** Package

**Title** GUI Tools for Interactive Image Processing with 'magick'

**Version** 1.1.1

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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 (>= 2.0)

**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** 6.1.1

**Encoding** UTF-8

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**Repository** CRAN

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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      *interactive canny edge detection*

---

### 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\_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 *interactive embossing*

---

### 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\_implode    *interactive imploding*

---

**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**

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