Package ‘ort’

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Type Package

Title Create a Data Frame Representation of an Image

Version 0.1.0

Description Takes images, imported via 'imager', and converts them into a data frame that can be plotted to look like the imported image. This can be used for creating data that looks like a specific image. Additionally, images with color and alpha channels can be converted to grayscale in preparation for converting to the data frame format.

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Encoding UTF-8

Depends magrittr, imager

RoxygenNote 7.3.3

NeedsCompilation no

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Repository CRAN

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ensure_grayscale *Convert 'cimg' object to grayscale via XYZ*

Description

Improves on the XYZ method of `grayscale` by handling alpha channel and retaining relative luminance of the image

Usage

```
ensure_grayscale(img, bg = 1)
```

Arguments

img	An `cimg` object containing an image (from 'imager')
bg	Background color in case of alpha (default is white)

Value

An `cimg` object, now in grayscale (just one color channel).

Examples

```
# Load image using imager
pineapple_img = load.image(system.file("FallingPineapple_16x16.png", package = "ort"))

# Create grayscale version
pineapple_gray = ensure_grayscale(pineapple_img)
plot(pineapple_gray)

# Example with alpha background

alph_img = load.image(system.file("alpha_gradient_test.png", package = "ort"))

# default assumes bg = 1 (white background)
alph_gray = ensure_grayscale(alph_img)
plot(alph_gray)

alph_gray_darker = ensure_grayscale(alph_img, bg = 0.75)
plot(alph_gray_darker)
```

ort *Create a data frame representation of an image*

Description

Takes a cimg object and attempts to create a data frame that, when plotted using the default plot in base R, looks like the original image.

Usage

```
ort(
  img,
  bg = 1,
  grid_size = function(x) {
     1/(250 * (1.0001 - x))
 },
  grid_offset = function(x) {
     sin(x * 100) * 10
 }
)
```

Arguments

img	An cimg object containing an image (from 'imager')
bg	Background color in case of alpha (default is white)
grid_size	Size of grid used for conversion
grid_offset	Offset of grid used for conversion

Value

A data frame with two columns, 'x' and 'y' that hopefully resembles the image when plotted

Examples

```
# Load image using imager
pineapple_img = load.image(system.file("FallingPineapple_16x16.png", package = "ort"))

# Convert to data frame plot
pineapple_ort = ort(pineapple_img)
plot(pineapple_ort)


# Example with alpha background
alph_img = load.image(system.file("alpha_gradient_test.png", package = "ort"))

# default assumes bg = 1 (white background)
alph_ort = ort(alph_img)
```

```
plot(alph_ort)

alph_ort_grey = ort(alph_img, bg = 0.5)
plot(alph_ort_grey)
```

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