Package: ltc (via r-universe)

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Title Collection of Artistic and Nature-Inspired Color Palettes

Version 0.4.0.9000

Description Offers a variety of color palettes inspired by art, nature, and personal inspirations. Each palette is accompanied by a unique backstory, enriching the understanding and significance of the colors.

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Contents

adjust_ltc 2
bird 3
custom_adjust_ltc 3

desaturate_ltc 4
info 5
ltc 5
ltc_cvd 6
ltc_pal 7
plot.ltc 7
print.ltc 8
scale_colour_ltc 8
scale_fill_ltc 9

Index **11**

`adjust_ltc` *Adjust Lightness of Palette Colors*

Description

Darken or lighten an entire palette or specific colors within it. Uses the colorspace package for perceptually uniform adjustments.

Usage

```
adjust_ltc(palette_name, amount = 0, which = NULL)
```

Arguments

`palette_name`	Character or unquoted name. Name of the ltc palette to adjust.
`amount`	Numeric. Amount to adjust lightness (-100 to 100). Negative values darken, positive values lighten. Default is 0 (no change).
`which`	Integer vector. Which colors to adjust (e.g., c(1, 3) for 1st and 3rd). If NULL (default), adjusts all colors.

Value

A vector of adjusted hex color codes with class "ltc"

Examples

```
# Darken entire palette
adjust_ltc(alger, amount = -20)

# Lighten entire palette
adjust_ltc("maya", amount = 30)

# Darken only specific colors
adjust_ltc(remains, amount = -25, which = c(2, 4))
```

bird *Plot a Colour Palette as a Bird*

Description

Visualizes a selected colour palette in the form of a bird drawing. Requires at least 5 colors in the palette.

Usage

```
bird(chrom)
```

Arguments

chrom	An ltc palette object

Value

A ggplot2 object showing a bird drawing using the selected colours.

Examples

```
# Create a bird visualization
pal <- ltc(paloma)
bird(pal)
```

custom_adjust_ltc *Create Custom Palette with Individual Color Adjustments*

Description

Apply different lightness adjustments to each color in a palette.

Usage

```
custom_adjust_ltc(palette_name, adjustments)
```

Arguments

palette_name	Character or unquoted name. Name of the ltc palette.
adjustments	Numeric vector. Lightness adjustments for each color (-100 to 100). Length must match the palette length.

Value

A vector of adjusted hex color codes with class "ltc"

Examples

```
# Different adjustment for each color
custom_adjust_ltc(remains, c(-30, 0, 40, 0))

# Create gradient effect
custom_adjust_ltc("maya", c(-40, -20, 0, 20, 40))
```

`desaturate_ltc` *Desaturate Palette Colors*

Description

Reduce color saturation (make colors more gray).

Usage

```
desaturate_ltc(palette_name, amount = 0.5, which = NULL)
```

Arguments

`palette_name`	Character or unquoted name. Name of the ltc palette.
`amount`	Numeric. Desaturation amount (0 to 1). 0 = no change, 1 = completely gray.
`which`	Integer vector. Which colors to desaturate. If NULL (default), affects all colors.

Value

A vector of desaturated hex color codes with class "ltc"

Examples

```
# Desaturate entire palette
desaturate_ltc(luminaries, amount = 0.5)

# Desaturate only specific colors
desaturate_ltc("heatmap2", amount = 0.7, which = c(1, 2))
```

info *Information about the Colour Palettes*

Description

This dataframe contains the backstory or inspiration behind each color palette.

Usage

```
info
```

Format

An object of class `data.frame` with 32 rows and 2 columns.

ltc *List of colour palettes*

Description

A list containing predefined colour palettes with artistic backstories.

This function provides the desired colour palette by name. You can call it with or without quotes: ltc(paloma) or ltc("paloma")

Usage

```
palettes

ltc(name, n, type = c("discrete", "continuous"))
```

Arguments

`name`	Character or unquoted name. The name of the desired palette.
`n`	Integer. The number of colors you want from the palette. If omitted, it uses all colors from the palette.
`type`	The type of palette. Either "discrete" or "continuous".

Format

An object of class `list` of length 32.

Details

ltc: A Collection of Art-inspired Colour Palettes

This package provides a collection of color palettes inspired by art, nature, and personal preferences. Each palette has a backstory, providing context and meaning to the colors.

Value

A vector of hex color codes with class "ltc"

Examples

```
# Load a palette (with or without quotes)
ltc(paloma)
ltc("maya")

# Select first 3 colors
ltc(maya, n = 3)

# Generate continuous palette
ltc(remains, n = 10, type = "continuous")
```

---

ltc_cvd *Preview a Palette under Colour Vision Deficiency (CVD)*

Description

Simulates how an `ltc` palette appears to viewers with the three main types of colour vision deficiency (colour blindness) and shows the result as rows of swatches. Useful for checking whether a palette stays distinguishable for colour-blind readers.

The simulation uses **colorspace**: deuteranopia (green-weak, the most common), protanopia (red-weak) and tritanopia (blue-weak).

Usage

```
ltc_cvd(name, severity = 1, labels = TRUE)
```

Arguments

`name`	Character or unquoted palette name (e.g. `dora` or `"dora"`), or a character vector of hex colours.
`severity`	Numeric in `[0, 1]`. Strength of the deficiency, where `1` is the full dichromatic simulation (the default) and lower values give milder anomalous-trichromacy simulations.
`labels`	Logical. If `TRUE` (default) the hex codes are printed on the swatches.

Value

A **ggplot2** object: one row of swatches per vision type (Normal, Deuteranopia, Protanopia, Tritanopia).

Examples

```
ltc_cvd(dora)
ltc_cvd("expevo", severity = 0.6)
```

ltc_pal *Build a Palette Function from an ltc Palette*

Description

Returns a function of n that gives n colours from the named palette, which is the form ggplot2 scales expect. Like the rest of the package, the name may be quoted, bare, or held in a variable.

If more colours are asked for than the palette holds, the palette is interpolated to that length rather than failing, so a scale never breaks on a data set with more groups than expected.

Usage

```
ltc_pal(name, direction = 1)
```

Arguments

name	Character or unquoted name. The name of the desired palette.
direction	1 keeps the palette order, -1 reverses it.

Value

A function taking n and returning a character vector of n hex colour codes.

Examples

```
pal <- ltc_pal(maya)
pal(3)

ltc_pal("expevo", direction = -1)(5)
```

plot.ltc *Plot a Colour Palette*

Description

Visualizes a selected colour palette as a bar of colours.

Usage

```
## S3 method for class 'ltc'
plot(x, ...)
```

Arguments

x	An ltc palette object
...	Additional arguments (currently unused).

Value

A ggplot2 object showing the selected colours.

Examples

```
# Create and plot a palette
pal <- ltc(paloma)
plot(pal)
```

`print.ltc` *Print Method for ltc Objects*

Description

Custom print method that displays the palette name followed by hex color codes with actual colors visible in the console.

Usage

```
## S3 method for class 'ltc'
print(x, ...)
```

Arguments

`x`	An ltc palette object
`...`	Additional arguments (currently unused)

Value

Invisibly returns the palette object

`scale_colour_ltc` *ggplot2 Colour Scale from an ltc Palette*

Description

Colours the `colour` aesthetic with an ltc palette, the way `scale_colour_viridis()` does. Set `discrete = FALSE` for a continuous scale. `scale_color_ltc()` is the same function under the US spelling.

Usage

```
scale_colour_ltc(name, discrete = TRUE, direction = 1, ...)

scale_color_ltc(name, discrete = TRUE, direction = 1, ...)
```

Arguments

name	Character or unquoted name. The name of the desired palette.
discrete	TRUE for a discrete scale, FALSE for a continuous one.
direction	1 keeps the palette order, -1 reverses it.
...	Passed on to ggplot2::discrete_scale() when discrete = TRUE, or to ggplot2::scale_colour_gra when discrete = FALSE.

Value

A ggplot2 scale, to add to a plot.

Examples

```
library(ggplot2)

ggplot(mtcars, aes(wt, mpg, colour = factor(cyl))) +
  geom_point(size = 3) +
  scale_colour_ltc(alger)
```

---

scale_fill_ltc *ggplot2 Fill Scale from an ltc Palette*

Description

Colours the fill aesthetic with an ltc palette, the way scale_fill_viridis() does. Set discrete = FALSE for a continuous scale.

Usage

```
scale_fill_ltc(name, discrete = TRUE, direction = 1, ...)
```

Arguments

name	Character or unquoted name. The name of the desired palette.
discrete	TRUE for a discrete scale, FALSE for a continuous one.
direction	1 keeps the palette order, -1 reverses it.
...	Passed on to ggplot2::discrete_scale() when discrete = TRUE, or to ggplot2::scale_fill_gradi when discrete = FALSE.

Value

A ggplot2 scale, to add to a plot.

Examples

```
library(ggplot2)

# discrete
ggplot(mtcars, aes(factor(cyl), mpg, fill = factor(cyl))) +
  geom_boxplot() +
  scale_fill_ltc(maya)

# continuous
ggplot(faithfuld, aes(waiting, eruptions, fill = density)) +
  geom_raster() +
  scale_fill_ltc(heatmap0, discrete = FALSE)
```

Index

∗ **datasets**
info, 5
ltc, 5

adjust_ltc, 2

bird, 3

custom_adjust_ltc, 3

desaturate_ltc, 4

ggplot2::discrete_scale(), *9*
ggplot2::scale_colour_gradientn(), *9*
ggplot2::scale_fill_gradientn(), *9*

info, 5

ltc, 5
ltc_cvd, 6
ltc_pal, 7

palettes *(*ltc*)*, 5
plot.ltc, 7
print.ltc, 8

scale_color_ltc *(*scale_colour_ltc*)*, 8
scale_colour_ltc, 8
scale_fill_ltc, 9