Package: cetcolor (via r-universe)

September 9, 2024

Title CET Perceptually Uniform Colour Maps

Version 0.2.2

Description Collection of perceptually uniform colour maps made by Peter Kovesi (2015) ``Good Colour Maps: How to Design Them'' <arXiv:1509.03700> at the Centre for Exploration Targeting (CET).

Depends R (>= 3.3.0)

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URL https://github.com/coatless-rpkg/cetcolor, https://r-pkg.thecoatlessprofessor.com/cetcolor/, http://peterkovesi.com/projects/colourmaps/

BugReports https://github.com/coatless-rpkg/cetcolor/issues

Encoding UTF-8

LazyData true

Suggests knitr, rmarkdown

VignetteBuilder knitr

RoxygenNote 7.2.3

Roxygen list(markdown = TRUE)

Repository https://coatless-rpkg.r-universe.dev

RemoteUrl https://github.com/coatless-rpkg/cetcolor

RemoteRef HEAD

RemoteSha c7e95748040f75f4aef364ad68413c439d590844

Contents

`cet_color_maps` *RGB Value Map of the CET Perceptually Uniform Colour Maps*

Description

A `list` of `data.frames` that have the RGB values of the CET Perceptually Uniform Colour Maps as released in May 2018 with the original maps released in June 2016.

Usage

```
cet_color_maps
```

Format

A `list` with each entry coded as a data frame with 256 observations and 3 variables:

- `R`: Red value
- `G`: Green value
- `B`: Blue value

The following color maps have been included:

Cyclic Colour Maps

- `c1`, formerly: `cyclic_mrybm_35-75_c68_n256`
- `c1s`, formerly: `cyclic_mrybm_35-75_c68_n256_s25`
- `c2`, formerly: `cyclic_mygbm_30-95_c78_n256`
- `c2s`, `colorwheel`, formerly: `cyclic_mygbm_30-95_c78_n256_s25`
- `c4`, formerly: `cyclic_wrwbw_40-90_c42_n256`
- `c4s`, formerly: `cyclic_wrwbw_40-90_c42_n256_s25`
- `c5`, formerly: `cyclic_grey_15-85_c0_n256`
- `c5s`, formerly: `cyclic_grey_15-85_c0_n256_s25`

Diverging Colour Maps

- `d1`, `coolwarm`, formerly: `diverging_bwr_40-95_c42_n256`
- `d1a`, long: `diverging_bwr_20-95_c54_n256`
- `d2`, `gwv`, formerly: `diverging_gwv_55-95_c39_n256`
- `d3`, formerly: `diverging_gwr_55-95_c38_n256`
- `d4`, `bkr`, formerly: `diverging_bkr_55-10_c35_n256`
- `d6`, `bky`, formerly: `diverging_bky_60-10_c30_n256`
- `d7`, `bjy`, formerly: `diverging-linear_bjy_30-90_c45_n256`
- `d8`, formerly: `diverging-linear_bjr_30-55_c53_n256`
- `d9`, formerly: `diverging_bwr_55-98_c37_n256`

- d10, formerly: diverging_cwm_80-100_c22_n256
- d11, formerly: diverging-isoluminant_cjo_70_c25_n256
- d12, formerly: diverging-isoluminant_cjm_75_c23_n256
- d13, long: diverging_bwg_20-95_c41_n256
- diverging-isoluminant_cjm_75_c24_n256
- diverging_gkr_60-10_c40_n256

Isoluminant Colour Maps

- i1, formerly: isoluminant_cm_70_c39_n256
- i2, isolum, formerly: isoluminant_cgo_80_c38_n256
- i3, formerly: isoluminant_cgo_70_c39_n256

Linear Colour Maps

- l1, gray, formerly: linear_grey_0-100_c0_n256
- l2, dimgray formerly: linear_grey_10-95_c0_n256
- l3, long: linear_kryw_0-100_c71_n256
- l4, long: linear_kry_0-97_c73_n256
- l5, kgy, formerly: linear_green_5-95_c69_n256
- l6, formerly: linear_blue_5-95_c73_n256
- l7, formerly: linear_bmw_5-95_c86_n256
- l8, formerly: linear_bmy_10-95_c71_n256
- l9, long: linear_bgyw_20-98_c66_n256
- l10, formerly: linear_gow_60-85_c27_n256
- l11, formerly: linear_gow_65-90_c35_n256
- l12, blues, formerly: linear_blue_95-50_c20_n256
- l13, kr, formerly: linear_ternary-red_0-50_c52_n256
- l14, long: linear_ternary-green_0-46_c42_n256
- l15, kb, formerly: linear_ternary-blue_0-44_c57_n256
- l16, long: linear_kbgyw_5-98_c62_n256
- l17, long: linear_worb_100-25_c53_n256
- l18, long: linear_wyor_100-45_c55_n256
- l19, long: linear_wcmr_100-45_c42_n256
- bgy, linear_bgy_10-95_c74_n256
- linear_bgyw_15-100_c67_n256
- bgyw, linear_bgyw_15-100_c68_n256
- bmw, linear_bmw_5-95_c89_n256
- inferno, linear_bmy_10-95_c78_n256
- linear_kry_5-95_c72_n256
- linear_kry_5-98_c75_n256

- linear_kryw_5-100_c64_n256
- fire, linear_kryw_5-100_c67_n256
- kg, linear_ternary-green_0-46_c42_n256

Rainbow Colour Maps

- r1, formerly: rainbow_bgyrm_35-85_c69_n256
- r2, formerly: rainbow_bgyr_35-85_c72_n256
- r3, formerly: diverging-rainbow_bgymr_45-85_c67_n256
- rainbow, rainbow_bgyr_35-85_c73_n256
- rainbow_bgyrm_35-85_c71_n256

Colour Blind

- cbl1, long: linear-protanopic-deuteranopic_kbjyw_5-95_c25_n256
- cbl2, long: linear-protanopic-deuteranopic_kbw_5-98_c40_n256
- cbd1, long: diverging-protanopic-deuteranopic_bwy_60-95_c32_n256
- cbc1, long: cyclic-protanopic-deuteranopic_bwyk_16-96_c31_n256
- cbc2, long: cyclic-protanopic-deuteranopic_wywb_55-96_c33_n256
- cbtl1, long: linear-tritanopic_krjcw_5-98_c46_n256
- cbtl2, long: linear-tritanopic_krjcw_5-95_c24_n256
- cbtd1, long: diverging-tritanopic_cwr_75-98_c20_n256
- cbtc1, long: cyclic-tritanopic_cwrk_40-100_c20_n256
- cbtc2, long: cyclic-tritanopic_wrwc_70-100_c20_n256

Source

http://peterkovesi.com/projects/colourmaps/CETperceptual_csv_0_1.zip

References

http://peterkovesi.com/projects/colourmaps/

`cet_pal` *CET Perceptually Uniform Color Maps*

Description

Extract n RGB Hexadecimal colors from the perceptually uniform color maps developed by Peter Kovesi.

Usage

```
cet_pal(n, name = "rainbow", alpha = 1)
```

Arguments

n	A numeric value greater than one indicating how many colors to use from the color map.
name	A string indicating the color map to use. There are 51 options available. Please see cet_color_maps() for more information. By default, the "rainbow" color scheme is used.
alpha	A numeric value between $[0, 1]$ that indicates the level of transparency.

Value

A character vector containing the RGB hexadecimal representation of the requested color map.

References

Peter Kovesi. Good Colour Maps: How to Design Them. arXiv:1509.03700 cs.GR 2015

Examples

```
# Grab 8 colors from rainbow or rainbow_bgyr_35-85_c73_n256
colors = cet_pal(8)
plot(1:8, 1:8, col=colors, pch=19, cex=3, xlab="", ylab="")

# Grab 25 colors from coolwarm or diverging_bwr_40-95_c42_n256
colors = cet_pal(25, name = "coolwarm")
plot(1:25, 1:25, col=colors, pch=19, cex=3, xlab="", ylab="")
```

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display_cet_pal *Display CET Color Maps*

Description

Offers a variety of ways to preview CET Color Maps.

Usage

```
display_cet_pal(n = 256, name = "rainbow", alpha = 1)

display_cet_attribute(n = 256, attribute = "rainbow", alpha = 1)

display_cet_all(n = 256, alpha = 1)
```

Arguments

n	A numeric value greater than one indicating how many colors to use from the color map.
name	A string indicating the color map to use. There are 51 options available. Please see cet_color_maps() for more information. By default, the "rainbow" color scheme is used.
alpha	A numeric value between $[0, 1]$ that indicates the level of transparency.
attribute	A character string indicating the attribute. Accepted values are: "rainbow" (Default), "linear", "diverging", "cyclic" "isoluminant", and "colorblind".

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