Package ‘ucie’

March 1, 2022

Type Package
Title Mapping 3D Data into CIELab Color Space
Version 1.0.1
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Description Returns a data frame with the names of the input data points and hex colors (or CIELab coordinates). Data can be mapped to colors for use in data visualization. It optimally maps data points into a polygon that represents the CIELab colour space. Since Euclidean distance approximates relative perceptual differences in CIELab color space, the result is a color encoding that aims to capture much of the structure of the original data.
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Encoding UTF-8
RoxygenNote 7.1.1
Imports colorspace, dplyr, geometry, pracma, ptinpoly, rgl, remotes
Suggests testthat (>= 3.0.0)
Config/testthat/edition 3
NeedsCompilation no
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Repository CRAN
Date/Publication 2022-03-01 17:20:02 UTC

R topics documented:

  data2cielab ................................................................. 2

Index 3
data2cielab

Mapping 3D Data into CIELab Color Space

Description
Returns a data frame with the names of the input data points and hex colors (or CIELab coordinates). Data can be mapped to colors for use in data visualization. It optimally maps data points into a polygon that represents the CIELab colour space. Since Euclidean distance approximates relative perceptual differences in CIELab color space, the result is a color encoding that aims to capture much of the structure of the original data.

Usage
data2cielab(dataset, WL = 1, Wa = 1, Wb = 1, S = 1, LAB_coordinates = FALSE)

Arguments
- dataset: 3-column dataset to be translated into colors.
- Wa: Weight of a* axis in optimization function. Default value 1.
- Wb: Weight of b* axis in optimization function. Default value 1.
- S: Scaling factor for color mapping. Default value 1.
- LAB_coordinates: Logical. If FALSE, the function returns a data frame with hex colors. If TRUE, the function returns a data frame with the L*a*b* coordinates. Default value FALSE.

Value
None

Examples

df <- data.frame(V1=runif(10, 0,1), V2=runif(10, 0,5), V3=runif(10, 0,30))
data_with_colors <- data2cielab(df, Wb=1.2, S=1.6)
data_with_colors <- data2cielab(df, LAB_coordinates = TRUE)
Index

data2cielab, 2