Package 'DOYPAColors'

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Type Package

Title Don't Overthink Your Palette of Colors

Version 0.0.2

Description Access diverse 'ggplot2'-compatible color palettes for simplified data visualization.

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URL https://github.com/jmestret/DOYPAColors,
     https://jmestret.github.io/DOYPAColors/

BugReports https://github.com/jmestret/DOYPAColors/issues

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doypa   *DOYPAColors Palette Selector*

Description

This function provides access to the DOYPAColors palettes, which are categorized into sequential, diverging, and qualitative types. You can select a palette, define the number of colors, reverse the order, and interpolate colors as a gradient.

Usage

```
doypa(
  palette = NULL,
  n = NULL,
  reverse = FALSE,
  gradient = FALSE,
  type = "all",
  colorblind = FALSE
)
```

Arguments

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	An integer specifying the number of colors to return. If 'NULL', the full palette is returned.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.

Value

A character vector of colors.

See Also

'list_doypa_pals' to list available palettes. 'preview_doypa_pals' to preview all color palettes.

Examples

```
# Get a palette by name
colors <- doypa("buzz")
print(colors)

# Get a random palette
colors <- doypa()
print(colors)

# Get a palette with a specific number of colors
colors <- doypa("google", n = 3)
print(colors)

# Reverse the order of the palette
colors <- doypa("buzz", reverse = TRUE)
print(colors)

# Interpolate colors as a gradient
colors <- doypa("buzz", n = 10, gradient = TRUE)
print(colors)
```

---

list_doypa_pals *List Available DOYPAColors Color Palettes*

Description

This function provides a list of all available DOYPAColors color palettes, categorized by type: sequential, diverging, and qualitative. It helps users to explore the various color palettes available for use in their visualizations.

Usage

```
list_doypa_pals()
```

Value

A named list containing the names of available color palettes for each type: "sequential", "diverging", and "qualitative".

Examples

```
# List available DOYPAColors color palettes by type
palette_names <- list_doypa_pals()
print(palette_names)
```

---

preview_doypa_pals   *Preview DOYPAColors Palettes*

Description

This function generates a visual preview of DOYPAColors color palettes. It helps users explore and select color schemes for their data visualizations by displaying each palette in a grid format.

Usage

```
preview_doypa_pals(type = "all", colorblind = FALSE)
```

Arguments

type   Character string specifying the type of palettes to preview. Options are: "all"
                (default), "seq" (sequential), "div" (diverging), or "qual" (qualitative).

colorblind   Logical. If 'TRUE', restricts the preview to palettes designed with colorblind
                individuals in mind.

Value

A 'ggplot' visualization displaying the DOYPAColors color palettes, facilitating exploration and selection of color schemes for data visualizations.

Examples

```
# Preview all available DOYPAColors palettes
preview_doypa_pals()

# Preview only sequential DOYPAColors palettes
preview_doypa_pals(type = "seq")

# Preview colorblind-friendly DOYPAColors palettes
preview_doypa_pals(colorblind = TRUE)
```

---

preview_pal   *Preview a Single Color Palette*

Description

This function generates a visual preview of a DOYPAColors palette with multiple plots. It includes a direct palette preview, a scatter plot, a bar plot, and a heatmap, each using the specified palette.

Usage

```
preview_pal(palette, seed = NULL)
```

Arguments

palette	A character string specifying the name of the palette to use.
seed	An optional seed for reproducibility of random numbers.

Value

A 'ggplot' object with multiple plots arranged in a grid, showcasing the color palette in different visualizations.

Examples

```
# Preview a DOYPAColors palette with multiple plots
preview_pal(palette = "buzz")
```

---

scale_color_doypa   *Color scale for ggplot2 with DOYPAColors color palettes*

Description

This function sets the color scale for ggplot2 using DOYPAColors color palettes, allowing you to apply these palettes to both discrete and continuous data.

Usage

```
scale_color_doypa(
  palette = NULL,
  n = NULL,
  reverse = FALSE,
  gradient = FALSE,
  discrete = FALSE,
  type = "all",
  colorblind = FALSE,
  ...
)
```

Arguments

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	Number of colors needed. If 'NULL', it will default to the number of levels for discrete scales or to a continuous gradient for continuous scales.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.

discrete	Boolean indicating whether to generate a discrete or continuous palette (default: continuous).
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.
...	Additional parameters passed to ggplot2's 'scale_color_*' functions.

Value

A 'ggplot2' color scale suitable for adding to a 'ggplot2' object to control color aesthetics.

Examples

```
library(ggplot2)

# Discrete data
data(iris)
disc <- ggplot(iris, aes(x = Petal.Width, y = Petal.Length, color = Species)) +
  geom_point() + theme_classic()
disc <- disc + scale_color_doypa(palette = "buzz", discrete = TRUE)
print(disc)

# Continuous data
cont <- ggplot(iris, aes(x = Petal.Width, y = Petal.Length, color = Sepal.Length)) +
  geom_point() + theme_classic()
cont <- cont + scale_color_doypa(palette = "buzz")
print(cont)

# Colorblind-friendly palette
disc_colorblind <- ggplot(iris, aes(x = Petal.Width, y = Petal.Length, color = Species)) +
  geom_point() + theme_classic()
disc_colorblind <- disc_colorblind + scale_color_doypa(colorblind = TRUE, discrete = TRUE)
print(disc_colorblind)
```

---

scale_colour_doypa	*Color scale for ggplot2 with DOYPAColors color palettes*

Description

This function sets the color scale for ggplot2 using DOYPAColors color palettes, allowing you to apply these palettes to both discrete and continuous data.

Usage

```
scale_colour_doypa(
  palette = NULL,
  n = NULL,
  reverse = FALSE,
  gradient = FALSE,
  discrete = FALSE,
  type = "all",
  colorblind = FALSE,
  ...
)
```

Arguments

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	Number of colors needed. If 'NULL', it will default to the number of levels for discrete scales or to a continuous gradient for continuous scales.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.
discrete	Boolean indicating whether to generate a discrete or continuous palette (default: continuous).
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.
...	Additional parameters passed to ggplot2's 'scale_colour_*' functions.

Value

A 'ggplot2' color scale suitable for adding to a 'ggplot2' object to control color aesthetics.

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scale_fill_doypa	*Fill scale for ggplot2 with DOYPAColors color palettes*

Description

This function sets the fill scale for ggplot2 using DOYPAColors color palettes, allowing you to use these palettes in your ggplot2 visualizations for both discrete and continuous data.

Usage

```
scale_fill_doypa(
  palette = NULL,
  n = NULL,
  reverse = FALSE,
  gradient = FALSE,
  discrete = FALSE,
  type = "all",
  colorblind = FALSE,
  ...
)
```

Arguments

palette	A character string specifying the name of the palette to use. If 'NULL', a random palette will be selected.
n	Number of colors needed. If 'NULL', it will default to the number of levels for discrete scales or to a continuous gradient for continuous scales.
reverse	A logical value indicating whether to reverse the order of colors in the palette. Default is 'FALSE'.
gradient	A logical value indicating whether to interpolate colors as a gradient of 'n' colors between the first and last colors of the palette. If 'FALSE', returns the first 'n' colors of the palette.
discrete	Boolean indicating whether to generate a discrete or continuous palette (default: continuous).
type	A character string specifying the type of palettes to select from: "all", "seq" (sequential), "div" (diverging), or "qual" (qualitative). Default is "all".
colorblind	A logical value indicating whether to restrict the palette to colorblind-friendly options. Default is 'FALSE'.
...	Additional parameters passed to ggplot2's 'scale_fill_*' functions.

Value

A 'ggplot2' fill scale suitable for adding to a 'ggplot2' object to control fill aesthetics.

Examples

```
library(ggplot2)

# Discrete data
data(iris)
disc <- ggplot(iris, aes(x = Species, y = Petal.Length, fill = Species)) +
  geom_boxplot() + theme_classic()
disc <- disc + scale_fill_doypa(palette = "buzz", discrete = TRUE)
print(disc)

# Continuous data
```

```
cont <- ggplot(faithfuld, aes(waiting, eruptions, fill = density)) +
  geom_tile() + theme_classic()
cont <- cont + scale_fill_doypa(palette = "buzz")
print(cont)

# Colorblind-friendly palette
disc_colorblind <- ggplot(iris, aes(x = Species, y = Petal.Length, fill = Species)) +
  geom_boxplot() + theme_classic()
disc_colorblind <- disc_colorblind + scale_fill_doypa(colorblind = TRUE, discrete = TRUE)
print(disc_colorblind)
```

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