Package: peRsian (via r-universe)

June 1, 2026

Title A Collection of Color Palettes Inspired by Persian Carpets.

Version 0.1.0

Description This package provides a collection of color palettes inspired by the intricate designs and rich colors of Persian carpets.

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Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

Suggests dplyr, ggplot2, knitr, rmarkdown, colorblindcheck, testthat (>= 3.0.0)

URL https://jan-yegi.github.io/peRsian/, https://github.com/jan-yegi/peRsian

VignetteBuilder knitr

Config/testthat/edition 3

Depends R (>= 3.5)

LazyData true

Repository https://jansim.r-universe.dev

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RemoteUrl https://github.com/jan-yegi/peRsian

RemoteRef HEAD

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Contents

`enamel` *Enamel Microstructure Data*

Description

A dataset containing measurements of enamel microstructure parameters from different enamel types, including human enamel and shark enamel, with and without fluoride treatment.

Usage

```
enamel
```

Format

A data frame with 3 rows and 5 variables:

group Type of enamel sample (character)

ld_mean Mean crystallite size in micrometers (numeric)

ld_sd Standard deviation of crystallite size in micrometers (numeric)

z_mean Mean volume percentage in vol% m (numeric)

z_sd Standard deviation of volume percentage in vol% m (numeric)

Details

The dataset includes three enamel types:

- Human enamel (untreated)
- Shark enamel
- Human enamel with daily rinse treatment using 0.2% NaF (sodium fluoride)

Source

Ögaard, B., Rölla, G., Ruben, J., Dijkman, T., & Arends, J. (1988). Microradiographic study of demineralization of shark enamel in a human caries model. European Journal of Oral Sciences, 96(3), 209-211. https://doi.org/10.1111/j.1600-0722.1988.tb01545.x

persian_palette *A Palette Generator Based on Persian Art*

Description

This is a collection of color palettes based on artifacts of persian art.

Usage

```
persian_palette(
  name,
  n,
  direction = c(1, -1),
  selection = c("sequential", "evenly")
)
```

Arguments

name	Name of desired palette.
n	Number of colors desired. Empty or -1 for all colors.
direction	Sets the order of colors in the palette. If 1, the default, colors are as output in the palette. If -1, the order of colors is reversed.
selection	For discrete palettes, either "sequential" (default, selects adjacent colors) or "evenly" (maximizes distance between selected colors).

Value

A vector of colours.

persian_palettes *Persian Color Palettes*

Description

A list of color palettes inspired by Persian art and artifacts. Each palette contains a vector of hex color codes.

Usage

```
persian_palettes
```

Format

A named list of character vectors containing hex color codes

See Also

persian_palette to generate palettes and persian_palettes_colorblind_safe for colorblind-safe options.

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persian_palettes_colorblind_safe

Colorblind-Safe Persian Color Palettes

Description

A subset of Persian color palettes that are colorblind-safe. These palettes have been tested for accessibility, see `vignette("check-colors")`.

Usage

```
persian_palettes_colorblind_safe
```

Format

A named list of character vectors containing hex color codes

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scale_color_persian_c

Continuous Color Scale for Persian Palettes

Description

Apply a continuous Persian color palette gradient to the color aesthetic in ggplot2.

Usage

```
scale_color_persian_c(name, direction = 1, n = 2, selection = "evenly", ...)

scale_colour_persian_c(name, direction = 1, n = 2, selection = "evenly", ...)
```

Arguments

`name`	Name of the Persian palette to use. Options include: "munich", "fery", "tehran", "leyli", "tabriz", "hooshang", "reyhaneh", "floral", "hamburg", "pooran", "abbas", "isfahan", "berlin" See persian_palettes for all available palette names.
`direction`	Sets the order of colors in the scale. If -1, the order of colors is reversed.
`n`	Number of colors desired. Empty or -1 for all colors.
`selection`	For discrete palettes, either "sequential" (default, selects adjacent colors) or "evenly" (maximizes distance between selected colors).
`...`	Additional arguments passed to scale_color_gradientn.

Value

A ggplot2 scale object.

Examples

```
library(ggplot2)
ggplot(enamel, aes(x = group, y = z_mean, color = z_sd)) +
  geom_segment(aes(x = group, xend = group, y = 0, yend = z_mean), linewidth = 1) +
  geom_point(size = 5) +
  scale_color_persian_c("isfahan")
```

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scale_color_persian_d

Discrete Color Scale for Persian Palettes

Description

Apply a discrete Persian color palette to the color aesthetic in ggplot2.

Usage

```
scale_color_persian_d(name, direction = 1, ...)

scale_color_persian(name, direction = 1, ...)

scale_colour_persian(name, direction = 1, ...)

scale_colour_persian_d(name, direction = 1, ...)
```

Arguments

`name`	Name of the Persian palette to use. Options include: "munich", "fery", "tehran", "leyli", "tabriz", "hooshang", "reyhaneh", "floral", "hamburg", "pooran", "abbas", "isfahan", "berlin" See `persian_palettes` for all available palette names.
`direction`	Sets the order of colors in the scale. If -1, the order of colors is reversed.
`...`	Additional arguments passed to `discrete_scale`.

Value

A ggplot2 scale object.

Examples

```
library(ggplot2)
ggplot(enamel, aes(x = group, y = ld_mean, color = group)) +
  geom_segment(aes(x = group, xend = group, y = 0, yend = ld_mean), linewidth = 1) +
  geom_point(size = 4) +
  scale_color_persian_d("isfahan")
```

scale_fill_persian_c *Continuous Fill Scale for Persian Palettes*

Description

Apply a continuous Persian color palette gradient to the fill aesthetic in ggplot2.

Usage

```
scale_fill_persian_c(name, direction = 1, n = 2, selection = "evenly", ...)
```

Arguments

`name`	Name of the Persian palette to use. Options include: "munich", "fery", "tehran", "leyli", "tabriz", "hooshang", "reyhaneh", "floral", "hamburg", "pooran", "abbas", "isfahan", "berlin" See `persian_palettes` for all available palette names.
`direction`	Sets the order of colors in the scale. If -1, the order of colors is reversed.
`n`	Number of colors desired. Empty or -1 for all colors.
`selection`	For discrete palettes, either "sequential" (default, selects adjacent colors) or "evenly" (maximizes distance between selected colors).
`...`	Additional arguments passed to `scale_fill_gradientn`.

Value

A ggplot2 scale object.

Examples

```
library(ggplot2)
ggplot(enamel, aes(x = group, y = ld_mean, fill = ld_sd)) +
  geom_col() +
  scale_fill_persian_c("fery")
```

scale_fill_persian_d *Discrete Fill Scale for Persian Palettes*

Description

Apply a discrete Persian color palette to the fill aesthetic in ggplot2.

Usage

```
scale_fill_persian_d(name, direction = 1, ...)

scale_fill_persian(name, direction = 1, ...)
```

Arguments

name	Name of the Persian palette to use. Options include: "munich", "fery", "tehran", "leyli", "tabriz", "hooshang", "reyhaneh", "floral", "hamburg", "pooran", "abbas", "isfahan", "berlin" See persian_palettes for all available palette names.
direction	Sets the order of colors in the scale. If -1, the order of colors is reversed.
...	Additional arguments passed to discrete_scale.

Value

A ggplot2 scale object.

Examples

```
library(ggplot2)
ggplot(enamel, aes(x = group, y = ld_mean, fill = group)) +
  geom_col() +
  scale_fill_persian_d("leyli")
```

Index