

Package ‘ggsci’

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Type Package

Title Scientific Journal and Sci-Fi Themed Color Palettes for
'ggplot2'

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Description A collection of 'ggplot2' color palettes inspired by
plots in scientific journals, data visualization libraries,
science fiction movies, and TV shows.

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VignetteBuilder knitr

URL <https://nanx.me/ggsci/>, <https://github.com/nanxstats/ggsci>

BugReports <https://github.com/nanxstats/ggsci/issues>

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pal_aaas	<i>AAAS Journal Color Palettes</i>
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Description

Color palettes inspired by plots in journals published by American Association for the Advancement of Science (AAAS), such as *Science* and *Science Translational Medicine*.

Usage

```
pal_aaas(palette = c("default"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette inspired by <i>Science</i>).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_aaas("default")(10))
show_col(pal_aaas("default", alpha = 0.6)(10))
```

pal_cosmic	<i>COSMIC Color Palettes</i>
------------	------------------------------

Description

Color palettes inspired by the colors used in projects from the [Catalogue Of Somatic Mutations in Cancers \(COSMIC\)](#)

Usage

```
pal_cosmic(
  palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
  alpha = 1
)
```

Arguments

palette	Palette type. Currently there are three available options: "signature_substitutions" (6-color palette), "hallmarks_light" (10-color palette), and "hallmarks_dark" (10-color palette). The "hallmarks_light" option is from Hanahan and Weinberg (2011) .
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Joshua H. Cook <<joshuacook0023@gmail.com>> | <[GitHub/jhrcook](#)>

Examples

```
library("scales")
show_col(pal_cosmic("hallmarks_light")(10))
show_col(pal_cosmic("hallmarks_light", alpha = 0.6)(10))
show_col(pal_cosmic("hallmarks_dark")(10))
show_col(pal_cosmic("hallmarks_dark", alpha = 0.6)(10))
show_col(pal_cosmic("signature_substitutions")(6))
show_col(pal_cosmic("signature_substitutions", alpha = 0.6)(6))
```

pal_d3

D3.js Color Palettes

Description

Color palettes based on the colors used by D3.js.

Usage

```
pal_d3(
  palette = c("category10", "category20", "category20b", "category20c"),
  alpha = 1
)
```

Arguments

palette	Palette type. There are 4 available options: "category10" (10-color palette); "category20" (20-color palette); "category20b" (20-color palette); "category20c" (20-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

References

<https://github.com/d3/d3-3.x-api-reference/blob/master/Ordinal-Scales.md>

Examples

```
library("scales")
show_col(pal_d3("category10")(10))
show_col(pal_d3("category20")(20))
show_col(pal_d3("category20b")(20))
show_col(pal_d3("category20c")(20))
```

pal_flatui

Flat UI Color Palettes

Description

Color palettes inspired by the colors used in *Flat UI Colors*.

Usage

```
pal_flatui(palette = c("default", "flattastic", "aussie"), alpha = 1)
```

Arguments

palette	Palette type. Currently there are three available option: "default" (10-color palette). "flattastic" (12-color palette). "aussie" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Clara Jégousse <<cat3@hi.is>>

Examples

```
library("scales")
show_col(pal_flatui("default")(10))
show_col(pal_flatui("flattastic")(12))
show_col(pal_flatui("aussie")(10))
show_col(pal_flatui("aussie", alpha = 0.6)(10))
```

pal_frontiers *Frontiers Color Palettes*

Description

Color palettes inspired by the colors used in *Frontiers*.

Usage

```
pal_frontiers(palette = c("default"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Clara Jégousse <<cat3@hi.is>>

Examples

```
library("scales")
show_col(pal_frontiers("default")(7))
show_col(pal_frontiers("default", alpha = 0.6)(7))
```

pal_futurama *The Futurama Color Palettes*

Description

Color palettes inspired by the colors used in *Futurama*.

Usage

```
pal_futurama(palette = c("planetexpress"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "planetexpress" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_futurama("planetexpress")(12))
show_col(pal_futurama("planetexpress", alpha = 0.6)(12))
```

pal_gsea

The GSEA GenePattern Color Palettes

Description

Color palette inspired by the colors used in the heatmaps plotted by GSEA GenePattern.

Usage

```
pal_gsea(palette = c("default"), n = 12, alpha = 1, reverse = FALSE)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (continuous palette with 12 base colors).
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
reverse	Logical. Should the order of the colors be reversed?

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_gsea("default")(12))
show_col(pal_gsea("default", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

pal_igv

Integrative Genomics Viewer (IGV) Color Palettes

Description

Color palettes based on the colors used by Integrative Genomics Viewer (IGV).

Usage

```
pal_igv(palette = c("default", "alternating"), alpha = 1)
```

Arguments

palette	Palette type. There are two available options: "default" (51-color palette); "alternating" (2-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

References

James T. Robinson, Helga Thorvaldsdóttir, Wendy Winckler, Mitchell Guttman, Eric S. Lander, Gad Getz, Jill P. Mesirov. Integrative Genomics Viewer. *Nature Biotechnology* 29, 24–26 (2011).

Examples

```
library("scales")
show_col(pal_igv("default")(51))
show_col(pal_igv("alternating")(2))
```

pal_jama

Journal of the American Medical Association Color Palettes

Description

Color palette inspired by plots in *The Journal of the American Medical Association*.

Usage

```
pal_jama(palette = c("default"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_jama("default")(7))
show_col(pal_jama("default", alpha = 0.6)(7))
```

pal_jco

Journal of Clinical Oncology Color Palettes

Description

Color palette inspired by plots in *Journal of Clinical Oncology*.

Usage

```
pal_jco(palette = c("default"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_jco("default")(10))
show_col(pal_jco("default", alpha = 0.6)(10))
```

pal_lancet

Lancet Journal Color Palettes

Description

Color palettes inspired by plots in Lancet journals, such as *Lancet Oncology*.

Usage

```
pal_lancet(palette = c("lanonc"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "lanonc" (9-color palette inspired by <i>Lancet Oncology</i>).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_lancet("lanonc")(9))
show_col(pal_lancet("lanonc", alpha = 0.6)(9))
```

pal_locuszoom

LocusZoom Color Palette

Description

Color palettes based on the colors used by LocusZoom.

Usage

```
pal_locuszoom(palette = c("default"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

References

Pruim, Randall J., et al. (2010). LocusZoom: regional visualization of genome-wide association scan results. *Bioinformatics*, 26(18), 2336–2337.

Examples

```
library("scales")
show_col(pal_locuszoom("default")(7))
show_col(pal_locuszoom("default", alpha = 0.6)(7))
```

pal_material	<i>Material Design Color Palettes</i>
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Description

The Material Design color palettes.

Usage

```
pal_material(
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",
             "deep-orange", "brown", "grey", "blue-grey"),
  n = 10,
  alpha = 1,
  reverse = FALSE
)
```

Arguments

palette Palette type. There are 19 available options:

- "red"
- "pink"
- "purple"
- "deep-purple"
- "indigo"
- "blue"
- "light-blue"
- "cyan"
- "teal"
- "green"
- "light-green"
- "lime"
- "yellow"
- "amber"

- "orange",
- "deep-orange"
- "brown"
- "grey"
- "blue-grey"

See **Material Design color system** for details.

n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
reverse	Logical. Should the order of the colors be reversed?

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_material("indigo")(10))
show_col(pal_material("indigo", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

pal_nejm

NEJM Color Palettes

Description

Color palette inspired by plots in *The New England Journal of Medicine*.

Usage

```
pal_nejm(palette = c("default"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (8-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_nejm("default")(8))
show_col(pal_nejm("default", alpha = 0.6)(8))
```

pal_npg	<i>NPG Journal Color Palettes</i>
---------	-----------------------------------

Description

Color palettes inspired by plots in journals published by Nature Publishing Group, such as *Nature Reviews Cancer*.

Usage

```
pal_npg(palette = c("nrc"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "nrc" (10-color palette inspired by <i>Nature Reviews Cancer</i>).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_npg("nrc")(10))
show_col(pal_npg("nrc", alpha = 0.6)(10))
```

pal_rickandmorty	<i>Rick and Morty Color Palettes</i>
------------------	--------------------------------------

Description

Color palettes inspired by the colors used in *Rick and Morty*.

Usage

```
pal_rickandmorty(palette = c("schwifty"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "schwifty" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_rickandmarty("schwifty")(12))
show_col(pal_rickandmarty("schwifty", alpha = 0.6)(12))
```

pal_simpsons

The Simpsons Color Palettes

Description

Color palettes inspired by the colors used in *The Simpsons*.

Usage

```
pal_simpsons(palette = c("springfield"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "springfield" (16-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_simpsons("springfield")(16))
show_col(pal_simpsons("springfield", alpha = 0.6)(16))
```

pal_startrek	<i>Star Trek Color Palettes</i>
--------------	---------------------------------

Description

Color palettes inspired by the colors used in *Star Trek*.

Usage

```
pal_startrek(palette = c("uniform"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "uniform" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_startrek("uniform")(7))
show_col(pal_startrek("uniform", alpha = 0.6)(7))
```

pal_tron	<i>Tron Legacy Color Palettes</i>
----------	-----------------------------------

Description

Color palettes inspired by the colors used in *Tron Legacy*.

Usage

```
pal_tron(palette = c("legacy"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "legacy" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_tron("legacy")(7))
show_col(pal_tron("legacy", alpha = 0.6)(7))
```

pal_uchicago

The University of Chicago Color Palettes

Description

Color palettes based on the colors used by the University of Chicago.

Usage

```
pal_uchicago(palette = c("default", "light", "dark"), alpha = 1)
```

Arguments

palette	Palette type. There are 3 available options: "default" (9-color palette); "light" (9-color light palette); "dark" (9-color dark palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

References

https://news.uchicago.edu/sites/default/files/attachments/_uchicago.identity.guidelines.pdf

Examples

```
library("scales")
show_col(pal_uchicago("default")(9))
show_col(pal_uchicago("light")(9))
show_col(pal_uchicago("dark")(9))
```

pal_ucscgb	<i>UCSC Genome Browser Color Palette</i>
------------	--

Description

Color palette from UCSC Genome Browser chromosome colors.

Usage

```
pal_ucscgb(palette = c("default"), alpha = 1)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (26-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_ucscgb("default")(26))
show_col(pal_ucscgb("default", alpha = 0.6)(26))
```

rgb_gsea	<i>The GSEA GenePattern Color Palettes</i>
----------	--

Description

Color palette inspired by the colors used in the heatmaps plotted by GSEA GenePattern.

Usage

```
rgb_gsea(palette = c("default"), n = 12, alpha = 1, reverse = FALSE)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (continuous palette with 12 base colors).
n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
reverse	Logical. Should the order of the colors be reversed?

Note

The 12 base colors used in this palette are derived from the [HeatMapImage documentation](#).

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("scales")
show_col(pal_gsea("default")(12))
show_col(pal_gsea("default", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

rgb_material

Material Design Color Palettes

Description

The Material Design color palettes.

Usage

```
rgb_material(
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",
    "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",
    "deep-orange", "brown", "grey", "blue-grey"),
  n = 10,
  alpha = 1,
  reverse = FALSE
)
```

Arguments

palette Palette type. There are 19 available options:

- "red"
- "pink"
- "purple"
- "deep-purple"
- "indigo"
- "blue"
- "light-blue"
- "cyan"
- "teal"
- "green"
- "light-green"

- "lime"
- "yellow"
- "amber"
- "orange",
- "deep-orange"
- "brown"
- "grey"
- "blue-grey"

See [Material Design color system](#) for details.

n	Number of individual colors to be generated.
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
reverse	Logical. Should the order of the colors be reversed?

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

References

<https://m2.material.io/design/color/the-color-system.html>

Examples

```
library("scales")
show_col(pal_material("indigo")(10))
show_col(pal_material("indigo", n = 30, alpha = 0.6, reverse = TRUE)(30))
```

scale_color_aaas	<i>AAAS Journal Color Scales</i>
------------------	----------------------------------

Description

See [pal_aaas](#) for details.

Usage

```
scale_color_aaas(palette = c("default"), alpha = 1, ...)
scale_colour_aaas(palette = c("default"), alpha = 1, ...)
scale_fill_aaas(palette = c("default"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette inspired by <i>Science</i>).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() + scale_color_aaas()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_aaas()
```

scale_color_cosmic *COSMIC Color Scales*

Description

See [pal_cosmic](#) for details.

Usage

```
scale_color_cosmic(
  palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
  alpha = 1,
  ...
)

scale_colour_cosmic(
  palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
  alpha = 1,
```

```

    ...
  )

  scale_fill_cosmic(
    palette = c("hallmarks_light", "hallmarks_dark", "signature_substitutions"),
    alpha = 1,
    ...
  )

```

Arguments

palette	Palette type. Currently there are three available options: "signature_substitutions" (6-color palette), "hallmarks_light" (10-color palette), and "hallmarks_dark" (10-color palette). The "hallmarks_light" option is from Hanahan and Weinberg (2011) .
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Joshua H. Cook <<joshuacook0023@gmail.com>> | <[GitHub/jhrcook](#)>

Examples

```

library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() + scale_color_cosmic()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_cosmic()

```

scale_color_d3

D3.js Color Scales

Description

See [pal_d3](#) for details.

Usage

```
scale_color_d3(  
  palette = c("category10", "category20", "category20b", "category20c"),  
  alpha = 1,  
  ...  
)
```

```
scale_colour_d3(  
  palette = c("category10", "category20", "category20b", "category20c"),  
  alpha = 1,  
  ...  
)
```

```
scale_fill_d3(  
  palette = c("category10", "category20", "category20b", "category20c"),  
  alpha = 1,  
  ...  
)
```

Arguments

palette	Palette type. There are 4 available options: "category10" (10-color palette); "category20" (20-color palette); "category20b" (20-color palette); "category20c" (20-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

References

<https://github.com/d3/d3-3.x-api-reference/blob/master/Ordinal-Scales.md>

Examples

```
library("ggplot2")  
data("diamonds")  
  
p1 <- ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw()  
  
p2 <- ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw()
```

```

subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
aes(x = depth, fill = cut)
) +
geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
theme_bw()

p1 + scale_color_d3()
p2 + scale_fill_d3()

p1 + scale_color_d3(palette = "category20")
p2 + scale_fill_d3(palette = "category20")

p1 + scale_color_d3(palette = "category20b")
p2 + scale_fill_d3(palette = "category20b")

p1 + scale_color_d3(palette = "category20c")
p2 + scale_fill_d3(palette = "category20c")

```

scale_color_flatui *Flat UI Color Scales*

Description

See [pal_flatui](#) for details.

Usage

```

scale_color_flatui(
  palette = c("default", "flattastic", "aussie"),
  alpha = 1,
  ...
)

scale_colour_flatui(
  palette = c("default", "flattastic", "aussie"),
  alpha = 1,
  ...
)

scale_fill_flatui(
  palette = c("default", "flattastic", "aussie"),
  alpha = 1,
  ...
)

```

Arguments

palette Palette type. Currently there are three available option: "default" (10-color palette). "flattastic" (12-color palette). "aussie" (10-color palette).

alpha Transparency level, a real number in (0, 1]. See alpha in [rgb](#) for details.
... additional parameters for [discrete_scale](#)

Author(s)

Clara Jégousse <<cat3@hi.is>>

Examples

```
library("ggplot2")
data("diamonds")

p1 <- ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw()

p2 <- ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw()

p1 + scale_color_flatui()
p2 + scale_fill_flatui()

p1 + scale_color_flatui(palette = "default")
p2 + scale_fill_flatui(palette = "default")

p1 + scale_color_flatui(palette = "flattastic")
p2 + scale_fill_flatui(palette = "flattastic")

p1 + scale_color_flatui(palette = "aussie")
p2 + scale_fill_flatui(palette = "aussie")
```

scale_color_frontiers *Frontiers Color Scales*

Description

See [pal_frontiers](#) for details.

Usage

```
scale_color_frontiers(palette = c("default"), alpha = 1, ...)
scale_colour_frontiers(palette = c("default"), alpha = 1, ...)
scale_fill_frontiers(palette = c("default"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Clara Jégousse <<cat3@hi.is>>

Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_dark() + theme(
    panel.background = element_rect(fill = "#2D2D2D"),
    legend.key = element_rect(fill = "#2D2D2D")
  ) +
  scale_color_frontiers()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_dark() + theme(
    panel.background = element_rect(fill = "#2D2D2D")
  ) +
  scale_fill_frontiers()
```

scale_color_futurama *The Futurama Color Scales*

Description

See [pal_futurama](#) for details.

Usage

```
scale_color_futurama(palette = c("planetexpress"), alpha = 1, ...)
```

```
scale_colour_futurama(palette = c("planetexpress"), alpha = 1, ...)
```

```
scale_fill_futurama(palette = c("planetexpress"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "planetexpress" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() + scale_color_futurama()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_futurama()
```

scale_color_gsea *The GSEA GenePattern Color Scales*

Description

See [pal_gsea](#) for details.

Usage

```
scale_color_gsea(palette = c("default"), alpha = 1, reverse = FALSE, ...)  
scale_colour_gsea(palette = c("default"), alpha = 1, reverse = FALSE, ...)  
scale_fill_gsea(palette = c("default"), alpha = 1, reverse = FALSE, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (continuous palette with 12 base colors).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
reverse	Logical. Should the order of the colors be reversed?
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")  
library("reshape2")  
data("mtcars")  
  
cor <- cor(mtcars)  
cor_melt <- melt(cor)  
  
ggplot(  
  cor_melt,  
  aes(x = Var1, y = Var2, fill = value)  
) +  
  geom_tile(colour = "black", size = 0.3) +  
  theme_bw() + scale_fill_gsea()
```

scale_color_igv *Integrative Genomics Viewer (IGV) Color Scales*

Description

See [pal_igv](#) for details.

Usage

```
scale_color_igv(palette = c("default", "alternating"), alpha = 1, ...)
```

```
scale_colour_igv(palette = c("default", "alternating"), alpha = 1, ...)
```

```
scale_fill_igv(palette = c("default", "alternating"), alpha = 1, ...)
```

Arguments

palette	Palette type. There are two available options: "default" (51-color palette); "alternating" (2-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
data("diamonds")

p1 <- ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw()

p2 <- ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw()

p1 + scale_color_igv()
p2 + scale_fill_igv()
```

```
p1 + scale_colour_manual(  
  values = rep(pal_igv("alternating")(2), times = 3)  
)  
p2 + scale_fill_manual(  
  values = rep(pal_igv("alternating")(2), times = 3)  
)
```

scale_color_jama

Journal of the American Medical Association Color Scales

Description

See [pal_jama](#) for details.

Usage

```
scale_color_jama(palette = c("default"), alpha = 1, ...)
```

```
scale_colour_jama(palette = c("default"), alpha = 1, ...)
```

```
scale_fill_jama(palette = c("default"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw() + scale_color_jama()  
  
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)
```

```
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_jama()
```

scale_color_jco *Journal of Clinical Oncology Color Scales*

Description

See [pal_jco](#) for details.

Usage

```
scale_color_jco(palette = c("default"), alpha = 1, ...)
scale_colour_jco(palette = c("default"), alpha = 1, ...)
scale_fill_jco(palette = c("default"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (10-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() + scale_color_jco()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_jco()
```

scale_color_lancet *Lancet Journal Color Scales*

Description

See [pal_lancet](#) for details.

Usage

```
scale_color_lancet(palette = c("lanonc"), alpha = 1, ...)
```

```
scale_colour_lancet(palette = c("lanonc"), alpha = 1, ...)
```

```
scale_fill_lancet(palette = c("lanonc"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "lanonc" (9-color palette inspired by <i>Lancet Oncology</i>).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() + scale_color_lancet()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_lancet()
```

scale_color_locuszoom *LocusZoom Color Scales*

Description

See [pal_locuszoom](#) for details.

Usage

```
scale_color_locuszoom(palette = c("default"), alpha = 1, ...)
```

```
scale_colour_locuszoom(palette = c("default"), alpha = 1, ...)
```

```
scale_fill_locuszoom(palette = c("default"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() + scale_color_locuszoom()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_locuszoom()
```

scale_color_material *Material Design Color Palettes*

Description

See [pal_material](#) for details.

Usage

```
scale_color_material(  
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",  
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",  
             "deep-orange", "brown", "grey", "blue-grey"),  
  alpha = 1,  
  reverse = FALSE,  
  ...  
)  
  
scale_colour_material(  
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",  
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",  
             "deep-orange", "brown", "grey", "blue-grey"),  
  alpha = 1,  
  reverse = FALSE,  
  ...  
)  
  
scale_fill_material(  
  palette = c("red", "pink", "purple", "deep-purple", "indigo", "blue", "light-blue",  
             "cyan", "teal", "green", "light-green", "lime", "yellow", "amber", "orange",  
             "deep-orange", "brown", "grey", "blue-grey"),  
  alpha = 1,  
  reverse = FALSE,  
  ...  
)
```

Arguments

palette	Palette type. There are 19 available options: <ul style="list-style-type: none">• "red"• "pink"• "purple"• "deep-purple"• "indigo"• "blue"• "light-blue"
---------	--

- "cyan"
- "teal"
- "green"
- "light-green"
- "lime"
- "yellow"
- "amber"
- "orange",
- "deep-orange"
- "brown"
- "grey"
- "blue-grey"

See [Material Design color system](#) for details.

alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
reverse	Logical. Should the order of the colors be reversed?
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
library("reshape2")
data("mtcars")

cor <- abs(cor(mtcars))
cor_melt <- melt(cor)

ggplot(
  cor_melt,
  aes(x = Var1, y = Var2, fill = value)
) +
  geom_tile(colour = "black", size = 0.3) +
  theme_bw() + scale_fill_material("blue-grey")
```

scale_color_nejm

NEJM Color Scales

Description

See [pal_nejm](#) for details.

Usage

```
scale_color_nejm(palette = c("default"), alpha = 1, ...)  
scale_colour_nejm(palette = c("default"), alpha = 1, ...)  
scale_fill_nejm(palette = c("default"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (8-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw() + scale_color_nejm()  
  
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)  
) +  
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +  
  theme_bw() + scale_fill_nejm()
```

Description

See [pal_npg](#) for details.

Usage

```
scale_color_npg(palette = c("nrc"), alpha = 1, ...)  
scale_colour_npg(palette = c("nrc"), alpha = 1, ...)  
scale_fill_npg(palette = c("nrc"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "nrc" (10-color palette inspired by <i>Nature Reviews Cancer</i>).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw() + scale_color_npg()  
  
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)  
) +  
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +  
  theme_bw() + scale_fill_npg()
```

scale_color_rickandmorty

Rick and Morty Color Scales

Description

See [pal_rickandmorty](#) for details.

Usage

```
scale_color_rickandmorty(palette = c("schwifty"), alpha = 1, ...)
```

```
scale_colour_rickandmorty(palette = c("schwifty"), alpha = 1, ...)
```

```
scale_fill_rickandmorty(palette = c("schwifty"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "schwifty" (12-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")
data("diamonds")
```

```
ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw() + scale_color_rickandmorty()
```

```
ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_rickandmorty()
```

scale_color_simpsons *The Simpsons Color Scales*

Description

See [pal_simpsons](#) for details.

Usage

```
scale_color_simpsons(palette = c("springfield"), alpha = 1, ...)  
scale_colour_simpsons(palette = c("springfield"), alpha = 1, ...)  
scale_fill_simpsons(palette = c("springfield"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "springfield" (16-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw() + scale_color_simpsons()  
  
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)  
) +  
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +  
  theme_bw() + scale_fill_simpsons()
```

scale_color_startrek *Star Trek Color Scales*

Description

See [pal_startrek](#) for details.

Usage

```
scale_color_startrek(palette = c("uniform"), alpha = 1, ...)  
scale_colour_startrek(palette = c("uniform"), alpha = 1, ...)  
scale_fill_startrek(palette = c("uniform"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "uniform" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_bw() + scale_color_startrek()  
  
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)  
) +  
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +  
  theme_bw() + scale_fill_startrek()
```

scale_color_tron

Tron Legacy Color Scales

Description

See [pal_tron](#) for details.

Usage

```
scale_color_tron(palette = c("legacy"), alpha = 1, ...)  
scale_colour_tron(palette = c("legacy"), alpha = 1, ...)  
scale_fill_tron(palette = c("legacy"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "legacy" (7-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

Examples

```
library("ggplot2")  
data("diamonds")  
  
ggplot(  
  subset(diamonds, carat >= 2.2),  
  aes(x = table, y = price, colour = cut)  
) +  
  geom_point(alpha = 0.7) +  
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +  
  theme_dark() + theme(  
    panel.background = element_rect(fill = "#2D2D2D"),  
    legend.key = element_rect(fill = "#2D2D2D")  
  ) +  
  scale_color_tron()  
  
ggplot(  
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),  
  aes(x = depth, fill = cut)  
) +  
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +  
  theme_dark() + theme(  
    panel.background = element_rect(fill = "#2D2D2D")  
  ) +  
  scale_fill_tron()
```

scale_color_uchicago *The University of Chicago Color Scales*

Description

See [pal_uchicago](#) for details.

Usage

```
scale_color_uchicago(palette = c("default", "light", "dark"), alpha = 1, ...)
```

```
scale_colour_uchicago(palette = c("default", "light", "dark"), alpha = 1, ...)
```

```
scale_fill_uchicago(palette = c("default", "light", "dark"), alpha = 1, ...)
```

Arguments

palette	Palette type. There are 3 available options: "default" (9-color palette); "light" (9-color light palette); "dark" (9-color dark palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

Author(s)

Nan Xiao <<me@nanx.me>> | <<https://nanx.me>>

References

https://news.uchicago.edu/sites/default/files/attachments/_uchicago.identity.guidelines.pdf

Examples

```
library("ggplot2")
data("diamonds")

p1 <- ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
  theme_bw()

p2 <- ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
```

```
geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw()

p1 + scale_color_uchicago()
p2 + scale_fill_uchicago()

p1 + scale_color_uchicago(palette = "light")
p2 + scale_fill_uchicago(palette = "light")

p1 + scale_color_uchicago(palette = "dark")
p2 + scale_fill_uchicago(palette = "dark")
```

scale_color_ucscgb *UCSC Genome Browser Color Scales*

Description

See [pal_ucscgb](#) for details.

Usage

```
scale_color_ucscgb(palette = c("default"), alpha = 1, ...)
scale_colour_ucscgb(palette = c("default"), alpha = 1, ...)
scale_fill_ucscgb(palette = c("default"), alpha = 1, ...)
```

Arguments

palette	Palette type. Currently there is one available option: "default" (26-color palette).
alpha	Transparency level, a real number in (0, 1]. See alpha in rgb for details.
...	additional parameters for discrete_scale

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Examples

```
library("ggplot2")
data("diamonds")

ggplot(
  subset(diamonds, carat >= 2.2),
  aes(x = table, y = price, colour = cut)
) +
  geom_point(alpha = 0.7) +
  geom_smooth(method = "loess", alpha = 0.1, size = 1, span = 1) +
```

```
theme_bw() + scale_color_ucscgb()

ggplot(
  subset(diamonds, carat > 2.2 & depth > 55 & depth < 70),
  aes(x = depth, fill = cut)
) +
  geom_histogram(colour = "black", binwidth = 1, position = "dodge") +
  theme_bw() + scale_fill_ucscgb()
```

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