Package 'ggreveal'

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Title Reveal a 'ggplot' Incrementally

Version 0.1.4

Description Provides functions that make it easy to reveal 'ggplot2' graphs incrementally. The functions take a plot produced with 'ggplot2' and return a list of plots showing data incrementally by panels, layers, groups, the values in an axis or any arbitrary aesthetic.

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Imports cli, dplyr, ggplot2, ggplotify, rlang, stringr, tidyr

Suggests testthat (>= 3.0.0), withr, vdiffr, mockery

Config/testthat/edition 3

URL http://www.weverthon.com/ggreveal/,
https://github.com/weverthonmachado/ggreveal

BugReports https://github.com/weverthonmachado/ggreveal/issues

NeedsCompilation no

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Repository CRAN

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reveal_aes   *Reveal plot by aes*

Description

Turns a ggplot into a list of plots, showing data incrementally by an arbitrary aesthetic.

Usage

```
reveal_aes(p, aes = "group", order = NULL, max = 20)
```

Arguments

p   A ggplot2 object

aes   which aesthetic to reveal E.g.: group, colour, shape, linetype

order   (optional) A numeric vector specifying in which order to reveal levels of the
                specified aesthetic.

                For example, if aes='shape' and the plot uses three shapes, order = c(3, 2,
                1) will invert the order in which they are revealed.

                Any shape not included in the vector will be omitted from the incremental plots.
                E.g.: with order = c(3, 1), the second shape is not shown.

                By default, the first plot is blank, showing layout elements (title, legends, axes,
                etc) but no data. To omit the blank plot, include -1: e.g. order = c(-1, 3, 1),
                or order = -1.

max   maximum number of unique levels of aesthetic to be used

Value

A list of ggplot2 objects, which can be passed to reveal_save()

Examples

```
# Create full plot
library(ggplot2)

 p <- mtcars |>
   ggplot(aes(mpg, wt,
              color = factor(vs),
              group = factor(vs))) +
   geom_point(aes(shape=factor(am)), size=2) +
   geom_smooth(method="lm",
               formula = 'y ~ x',
               linewidth=1)
 p

 plot_list <- reveal_aes(p, "shape")
 plot_list[[1]]
```

```
 plot_list[[2]]
 plot_list[[3]]
 plot_list[[4]]


 # Save plots
 reveal_save(plot_list, "myplot.png", width = 8, height = 4, path = tempdir())

 # Clean temp files
 file.remove(list.files(path = tempdir(), pattern = "myplot", full.names = TRUE))
```

---

reveal_groups	*Reveal plot by group*

Description

Turns a ggplot into a list of plots, showing data incrementally by groups. Note that if the group aesthetic is not explicitly defined in the original plot, ggplot2 will set it to the interaction of all discrete variables (see ggplot2::aes_group_order).

Usage

```
reveal_groups(p, order = NULL)
```

Arguments

p	A ggplot2 object
order	(optional) A numeric vector specifying in which order to reveal the groups
	For example, if there are three groups in the plot, order = c(3, 2, 1) will invert the order in which they are revealed.
	Any group not included in the vector will be omitted from the incremental plots. E.g.: with order = c(3, 1), the second group is not shown.
	By default, the first plot is blank, showing layout elements (title, legends, axes, etc) but no data. To omit the blank plot, include -1: e.g. order = c(-1, 3, 1), or order = -1.

Value

A list of ggplot2 objects, which can be passed to reveal_save()

Examples

```
# Create full plot
library(ggplot2)
data("mtcars")

p <- mtcars |>
  ggplot(aes(mpg, wt,
```

```
              color = factor(vs),
              group = factor(vs))) +
  geom_point() +
  geom_smooth(method="lm",
              formula = 'y ~ x',
              linewidth=1) +
  facet_wrap(~am)
p

plot_list <- reveal_groups(p)
plot_list[[1]]
plot_list[[2]]
plot_list[[3]]

# Save plots
reveal_save(plot_list, "myplot.png", width = 8, height = 4, path = tempdir())

# Clean temp files
file.remove(list.files(path = tempdir(), pattern = "myplot", full.names = TRUE))
```

---

reveal_layers   *Reveal plot by layer*

Description

Turns a ggplot into a list of plots, showing data incrementally by layers.

Usage

```
reveal_layers(p, order = NULL)
```

Arguments

p	A ggplot2 object
order	(optional) A numeric vector specifying in which order to reveal the layers
	For example, if there are three layers in the plot, order = c(3, 2, 1) will invert the order in which they are revealed.
	Any layer not included in the vector will be omitted from the incremental plots. E.g.: with order = c(3, 1), the second layer is not shown.
	By default, the first plot is blank, showing layout elements (title, legends, axes, etc) but no data. To omit the blank plot, include -1: e.g. order = c(-1, 3, 1), or order = -1.

Value

A list of ggplot2 objects, which can be passed to reveal_save()

Examples

```
# Create full plot
library(ggplot2)
data("mtcars")

p <- mtcars |>
  ggplot(aes(mpg, wt,
             color = factor(vs),
             group = factor(vs))) +
  geom_point() +
  geom_smooth(method="lm",
              formula = 'y ~ x',
              linewidth=1) +
  facet_wrap(~am)
p

plot_list <- reveal_layers(p)
plot_list[[1]]
plot_list[[2]]
plot_list[[3]]

# Save plots
reveal_save(plot_list, "myplot.png", width = 8, height = 4, path = tempdir())

# Clean temp files
file.remove(list.files(path = tempdir(), pattern = "myplot", full.names = TRUE))
```

---

reveal_panels   *Reveal plot by panel*

Description

Turns a ggplot into a list of plots, showing data incrementally by panels.

Usage

```
reveal_panels(p, order = NULL, what = c("data", "everything"))
```

Arguments

p	A ggplot2 object
order	(optional) A numeric vector specifying in which order to reveal the panels
	For example, if there are three panels in the plot, order = c(3, 2, 1) will invert the order in which they are revealed.
	Any panel not included in the vector will be omitted from the incremental plots. E.g.: with order = c(3, 1), the second panel is not shown.
	By default, the first plot is blank, showing layout elements (title, legends, axes, etc) but no data. To omit the blank plot, include -1: e.g. order = c(-1, 3, 1), or order = -1.

what   (optional) one of "data" or "everything".' With "data" (the default), the basic graph layout, including axes and facet labels, is shown from the start, and only the data points are shown incrementally. With "everything", the entire panels are shown incrementally.

Value

A list of ggplot2 objects, which can be passed to reveal_save()

Examples

```
# Create full plot
library(ggplot2)
data("mtcars")

p <- mtcars |>
  ggplot(aes(mpg, wt,
             color = factor(vs),
             group = factor(vs))) +
  geom_point() +
  geom_smooth(method="lm",
              formula = 'y ~ x',
              linewidth=1) +
  facet_wrap(~am)
p

# Only data
plot_list <- reveal_panels(p, what = "data")
plot_list[[1]]
plot_list[[2]]
plot_list[[3]]

# Everything
plot_list <- reveal_panels(p, what = "everything")
plot_list[[1]]
plot_list[[2]]
plot_list[[3]]

# Save plots
reveal_save(plot_list, "myplot.png", width = 8, height = 4, path = tempdir())

# Clean temp files
file.remove(list.files(path = tempdir(), pattern = "myplot", full.names = TRUE))
```

---

reveal_save   *Saves incremental plots*

Description

Saves incremental plots

Usage

```
reveal_save(plot_list, basename, ...)
```

Arguments

plot_list	A list of plots created by one of the reveal_* functions (e.g. reveal_groups(), reveal_layers(), reveal_aes()]
basename	The base file name that will be used for saving.
...	Additional arguments (e.g. width, height) to be passed to ggplot2::ggsave()

Value

The paths of the saved plots, invisibly

Examples

```
# Create full plot
library(ggplot2)
data("mtcars")

p <- mtcars |>
  ggplot(aes(mpg, wt,
             color = factor(vs),
             group = factor(vs))) +
  geom_point() +
  geom_smooth(method="lm",
              formula = 'y ~ x',
              linewidth=1) +
  facet_wrap(~am)
p

plot_list <- reveal_groups(p)
plot_list[[1]]
plot_list[[2]]
plot_list[[3]]

# Save plots
reveal_save(plot_list, "myplot.png", width = 8, height = 4, path = tempdir())

# Clean temp files
file.remove(list.files(path = tempdir(), pattern = "myplot", full.names = TRUE))
```

---

reveal_x   *Reveal plot by axis*

Description

Turns a ggplot into a list of plots, showing data incrementally by the categories in the x or y axis.

Usage

```
reveal_x(p, order = NULL)

reveal_y(p, order = NULL)
```

Arguments

p	A ggplot2 object
order	(optional) A numeric vector specifying in which order to reveal the categories

                    For example, if there are three categories in the axis, order = c(3, 2, 1) will invert the order in which they are revealed.

                    Any category not included in the vector will be omitted from the incremental plots. E.g.: with order = c(3, 1), the second category is not shown.

                    By default, the first plot is blank, showing layout elements (title, legends, axes, etc) but no data. To omit the blank plot, include -1: e.g. order = c(-1, 3, 1), or order = -1.

Value

A list of ggplot2 objects, which can be passed to reveal_save()

Examples

```
# Create full plot
library(ggplot2)
data("mtcars")

p <- mtcars |>
  ggplot(aes(factor(vs),
             color = gear,
             fill= gear,
             group = gear)) +
  geom_bar() +
  facet_wrap(~am)
p

plot_list <- reveal_x(p)
plot_list[[1]]
plot_list[[2]]
plot_list[[3]]

# Save plots
reveal_save(plot_list, "myplot.png", width = 8, height = 4, path = tempdir())

# Clean temp files
file.remove(list.files(path = tempdir(), pattern = "myplot", full.names = TRUE))
```

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