Use of ggprism and ggsci packages

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Overview

ggprism and **ggsci** can respectively set the style and color of the picture generated by ggplot. This style and color are used in a large number of papers.

Package

- library(ggprism)
- library(ggsci)

ggprism

- theme_prism()

Change the style of the graph, similar to the style of the Prism software.

- scale_color_prism(palette="colors")
- scale_fill_prism(palette="colors")
- scale_colour_prism(palette="colors")

There are many optional color schemes to change the color of the picture, which is very convenient.

- scale_shape_prism()

Shape scales that approximate those used in GraphPad Prism.

- scale_x_discrete(guide = "prism_bracket")

Segment the coordinate axis.

- add_pvalue(data_frame)

Add a hypothesis test p-value to the picture

ggsci

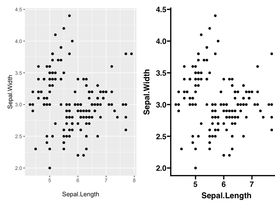
- scale_color_aaas()
- scale_color_d3()
- scale_color_npg()
- There are too many coloring scheme to write...

This function can directly call the color scheme of various scientific journals, which is very beautiful and very convenient to use.

Example

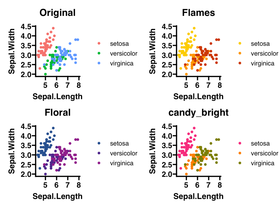
The picture on the left does not use theme_prism, the picture on the right uses it.

```
p1 <- iris %>% ggplot(aes(Sepal.Length,Sepal.Width))+geom_point()
p2 <- iris %>% ggplot(aes(Sepal.Length,Sepal.Width))+geom_point()+theme_prism()
p1+p2
```



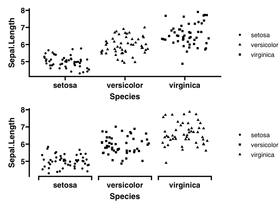
The default coordination of ggplot and the color scheme of ggprism are respectively shown. ggprism's high-contrast color matching is very suitable for scientific research articles.

```
p1 <- iris %>% ggplot(aes(Sepal.Length,Sepal.Width,color=Species))+geom_point()+theme_prism()+ggtitle("Original")
p2 <- iris %>% ggplot(aes(Sepal.Length,Sepal.Width,color=Species))+geom_point()+theme_prism()+scale_color_prism(p
alette = "flames")+ggtitle("Flames")
p3 <- iris %>% ggplot(aes(Sepal.Length,Sepal.Width,color=Species))+geom_point()+theme_prism()+scale_color_prism(p
alette = "floral")+ggtitle("Floral")
p4 <- iris %>% ggplot(aes(Sepal.Length,Sepal.Width,color=Species))+geom_point()+theme_prism()+scale_color_prism(p
alette = "candy_bright")+ggtitle("candy_bright")
(p1+p2)/(p3+p4)
```



The image above does not use the x-axis segmentation, and the image below uses the x-axis segmentation.

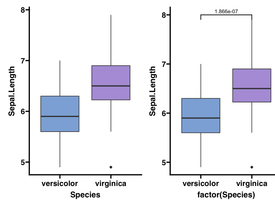
```
p1 <- iris %>% ggplot(aes(Species,Sepal.Length))+geom_jitter(aes(shape=Species))+theme_prism()
p2 <- iris %>% ggplot(aes(Species,Sepal.Length))+geom_jitter(aes(shape=Species))+theme_prism()+scale_x_discrete(g
uide = "prism_bracket")+scale_shape_prism()
p1/p2
```



The picture on the right has pvalue added, and the picture on the left does not.

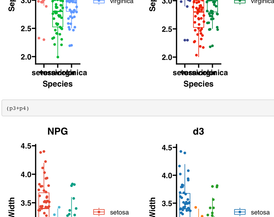
```
p1 <- iris %>% filter(Species %in% c("virginica","versicolor")) %>% ggplot(aes(Species,Sepal.Length,fill=Species)
)+geom_boxplot()+theme_prism()+scale_fill_prism('floral')+theme(legend.position = "none")
two.means <- tibble::tribble(
  ~group1, ~group2,  ~p,      ~y.position,
  "virginica",    "versicolor",    1.866e-07, 36
)
p <- data.frame(
  group1="virginica",
  group2="versicolor",
  p.adj = 1.866e-07,
  y.position = 8
)

p2 <-  iris %>% filter(Species %in% c("virginica","versicolor")) %>% ggplot(aes(factor(Species),Sepal.Length))+ge
om_boxplot(aes(fill=Species))+theme_prism()+scale_fill_prism('floral')+theme(legend.position = "none")+add_pvalue
(data=p)
p1+p2
```

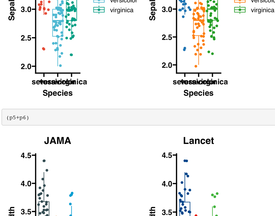


The various color schemes of ggsci are shown below.

```
p1 <- iris %>% ggplot(aes(Species,Sepal.Width,color=Species))+geom_boxplot()+geom_jitter()+theme_prism()+ggtitle(
"Original")
p2 <- iris %>% ggplot(aes(Species,Sepal.Width,color=Species))+geom_boxplot()+geom_jitter()+theme_prism()+scale_c
olor_aaas()+ggtitle("AAAS")
p3 <- iris %>% ggplot(aes(Species,Sepal.Width,color=Species))+geom_boxplot()+geom_jitter()+theme_prism()+scale_co
lor_npg()+ggtitle("NPG")
p4 <- iris %>% ggplot(aes(Species,Sepal.Width,color=Species))+geom_boxplot()+geom_jitter()+theme_prism()+scale_co
lor_d3()+ggtitle("d3")
p5 <- iris %>% ggplot(aes(Species,Sepal.Width,color=Species))+geom_boxplot()+geom_jitter()+theme_prism()+scale_co
lor_jama()+ggtitle("JAMA")
p6 <- iris %>% ggplot(aes(Species,Sepal.Width,color=Species))+geom_boxplot()+geom_jitter()+theme_prism()+scale_co
lor_lancet()+ggtitle("Lancet")
(p1+p2)
```




```
(p3+p4)
```




```
(p5+p6)
```