

# RSS

## R

R (R Core Team 2021) . R  
base R {ggplot2} (Wickham 2016) .  
R {RSSthemes} . GitHub  
.  
CRAN {RSSthemes} :

```
install.packages("RSSthemes")
```

GitHub (CRAN ):

```
remotes::install_github("nrennie/RSSthemes")
```

:

```
library(RSSthemes)
```

## Base R

R (2018) base R. [. Jumping Rivers](#) (“Styling Base r Graphics”

```
: base R .  
 , , col RSS . signif_red, signif_blue, signif_green,  
signif_orange, signif_yellow .
```

```
barplot(table(mtcars$gear), col = signif_blue)
```

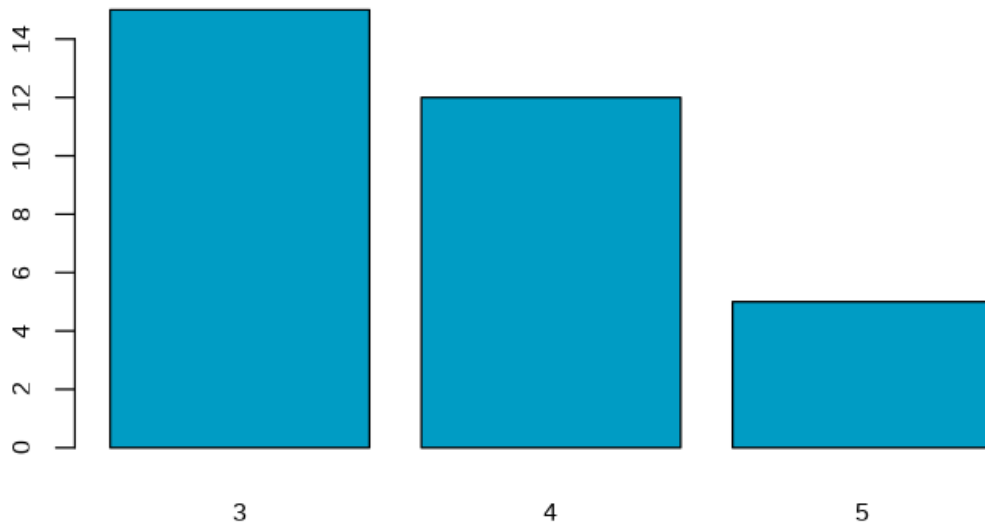


Figure 1: *Significance*

```
palette() . {RSSthemes} set_rss_palette()  
{RSSthemes} . signif_qual, signif_div,  
signif_seq .
```

```
set_rss_palette("signif_qual")  
plot(1:4, 1:4, col=1:4, pch=19, cex=3, xlab="", ylab="")
```

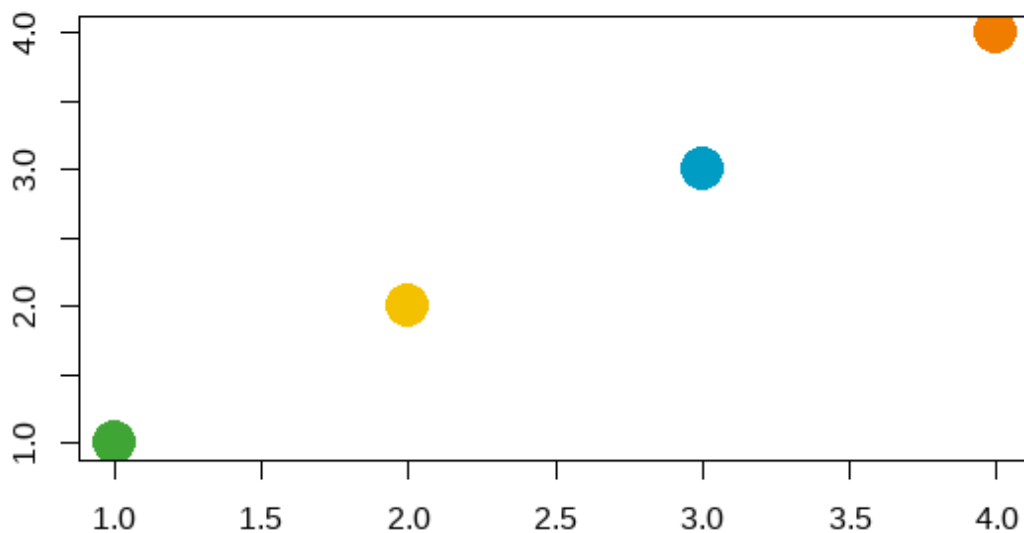
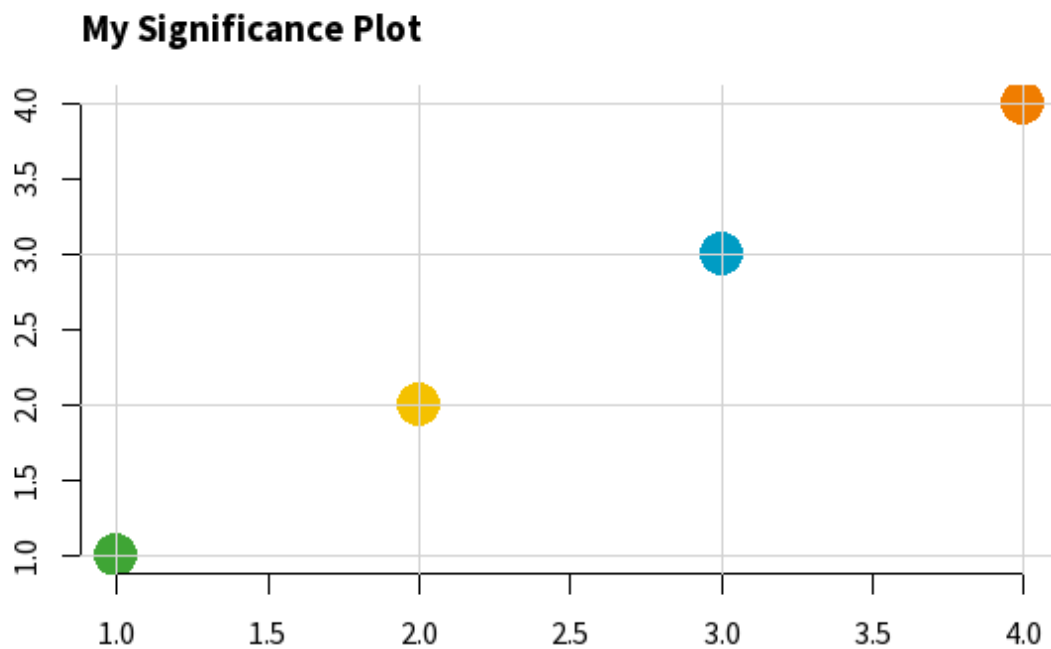


Figure 2: signif\_qual

```
palette("default")      base R
: base R
plot() ( barplot(), hist() base R )
. par() . {RSSthemes} base R
set_signif_par() . abline()
```

```
set_signif_par()
plot(1:4, 1:4, col=1:4, pch=19, cex=3, xlab="", ylab="",
     main = " Significance ",
     sub = " : ")
abline(h=1:4, v=1:4, col = "lightgrey")
```



Source: data source

Figure 3: `set_signif_par()` base R .

## {ggplot2}

{ggplot2} {tidyverse} R . {ggplot2}  
 Hadley Wickham [ggplot2: Elegant Graphics for Data Analysis](#) (Wickham 2016) .

{ggplot2} .

```
library(ggplot2)
plot_df <- data.frame(x = LETTERS[1:4],
                      y = 1:4)
```

: {ggplot2} .

```
{ggplot2} colour( color) , fill , fill
colour RSS . signif_red, signif_blue, signif_green, signif_orange,
signif_yellow .
```

```
ggplot(data = plot_df,
       mapping = aes(x = x, y = y)) +
  geom_col(fill = signif_yellow)
```

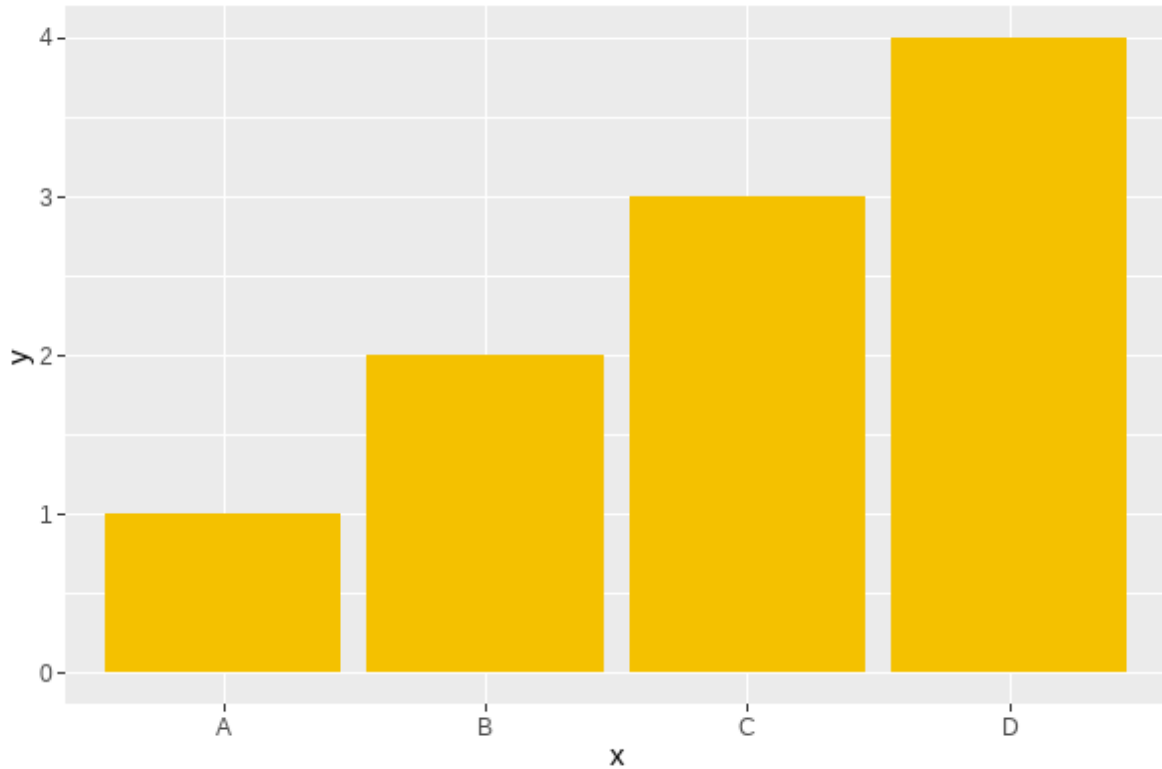


Figure 4:

```
: {ggplot2}
( ) "signif_qual" . 4
• ( ) : scale_fill_rss_d()
```

```
ggplot(data = plot_df,
       mapping = aes(x = x, y = y, fill = x)) +
  geom_col() +
  scale_fill_rss_d(palette = "signif_qual")
```

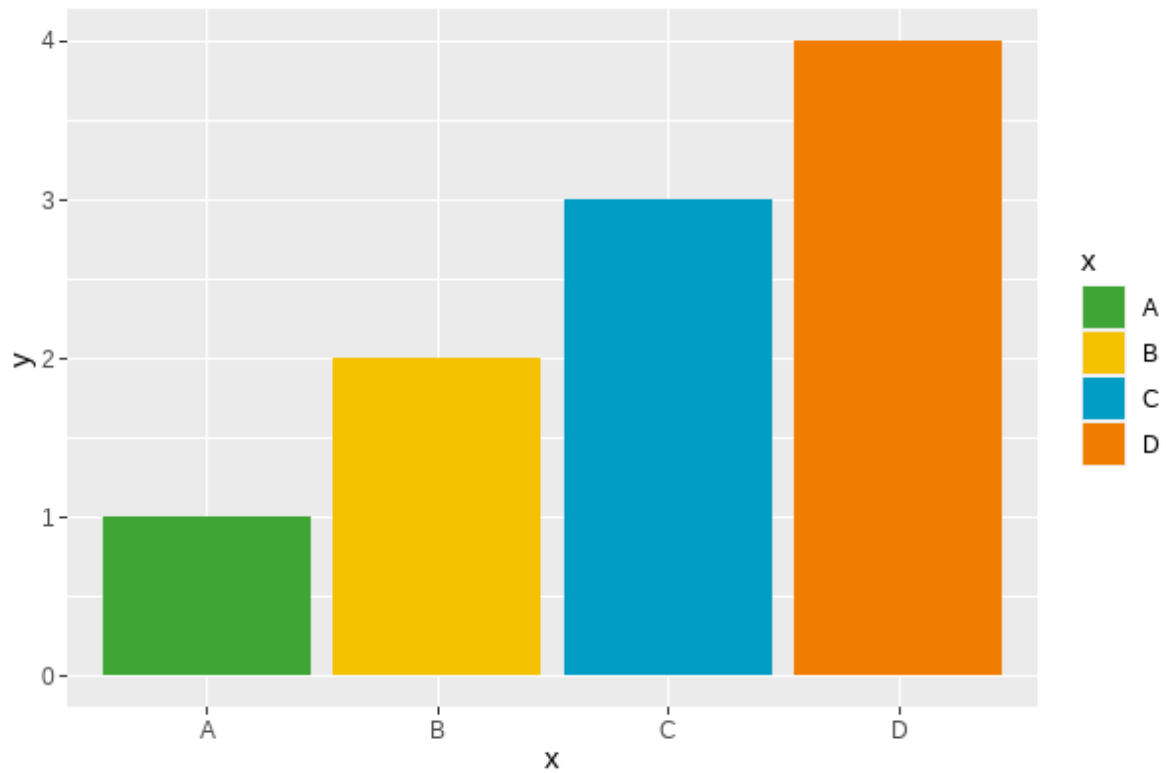


Figure 5: signif\_qual

- ( ) : scale\_colour\_rss\_d()

```
ggplot(data = plot_df,
       mapping = aes(x = x, y = y, colour = x)) +
  geom_point(size = 4) +
  scale_colour_rss_d(palette = "signif_qual")
```

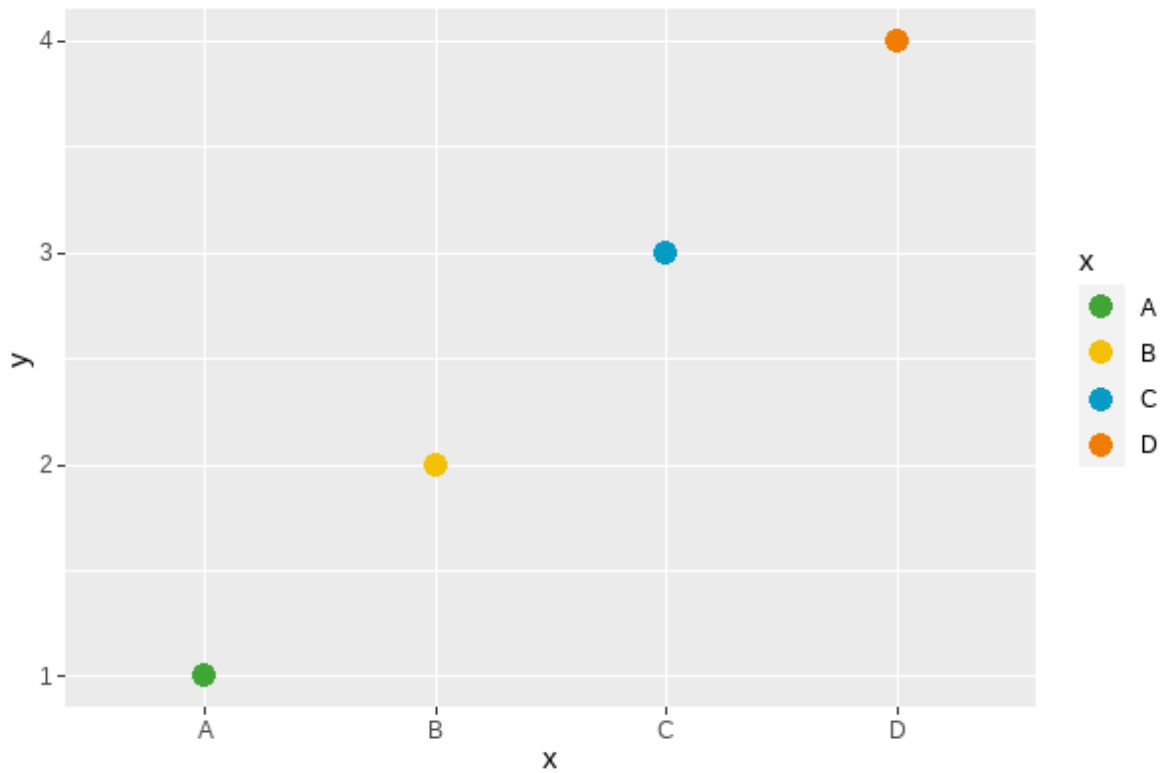


Figure 6: signif\_qual .

```
: {ggplot2} .
. ( ) "signif_seq" .
• ( ) : scale_fill_rss_c()
```

```
ggplot(data = plot_df,
  mapping = aes(x = x, y = y, fill = y)) +
  geom_col() +
  scale_fill_rss_c(palette = "signif_seq")
```

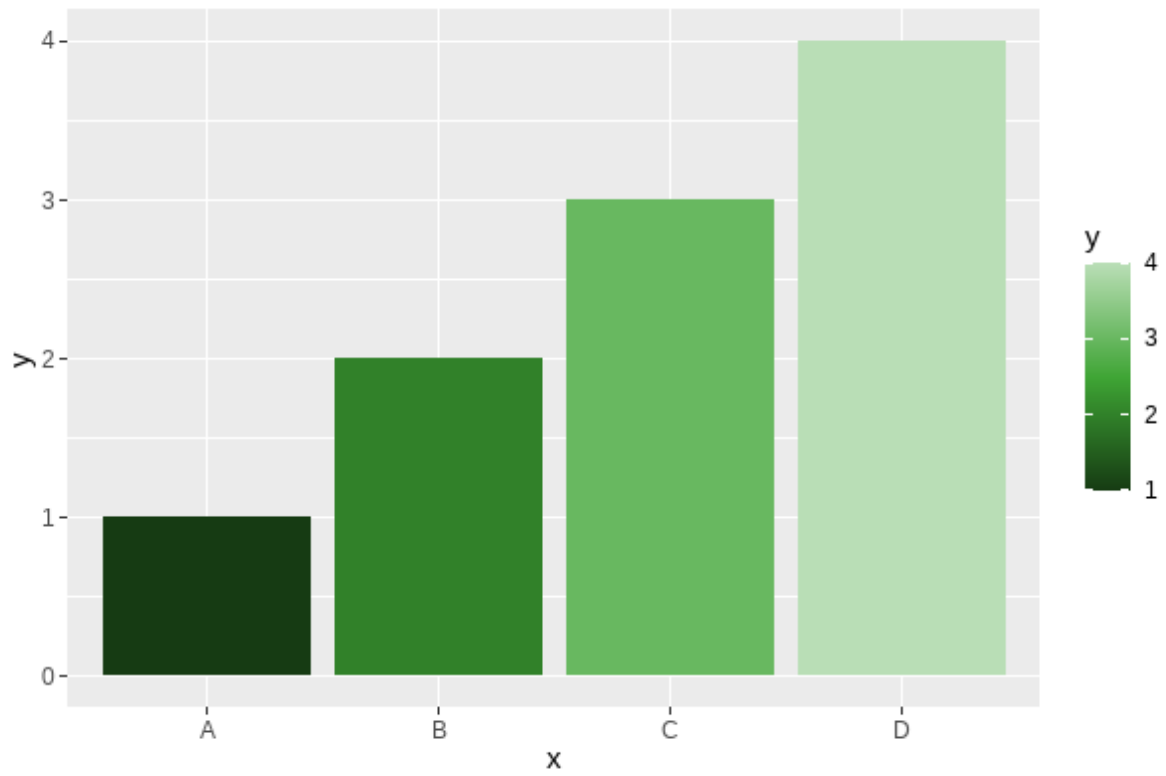


Figure 7:

- ( ) : `scale_colour_rss_c()`

```
ggplot(data = plot_df,
       mapping = aes(x = x, y = y, colour = y)) +
  geom_point(size = 4) +
  scale_colour_rss_c(palette = "signif_seq")
```



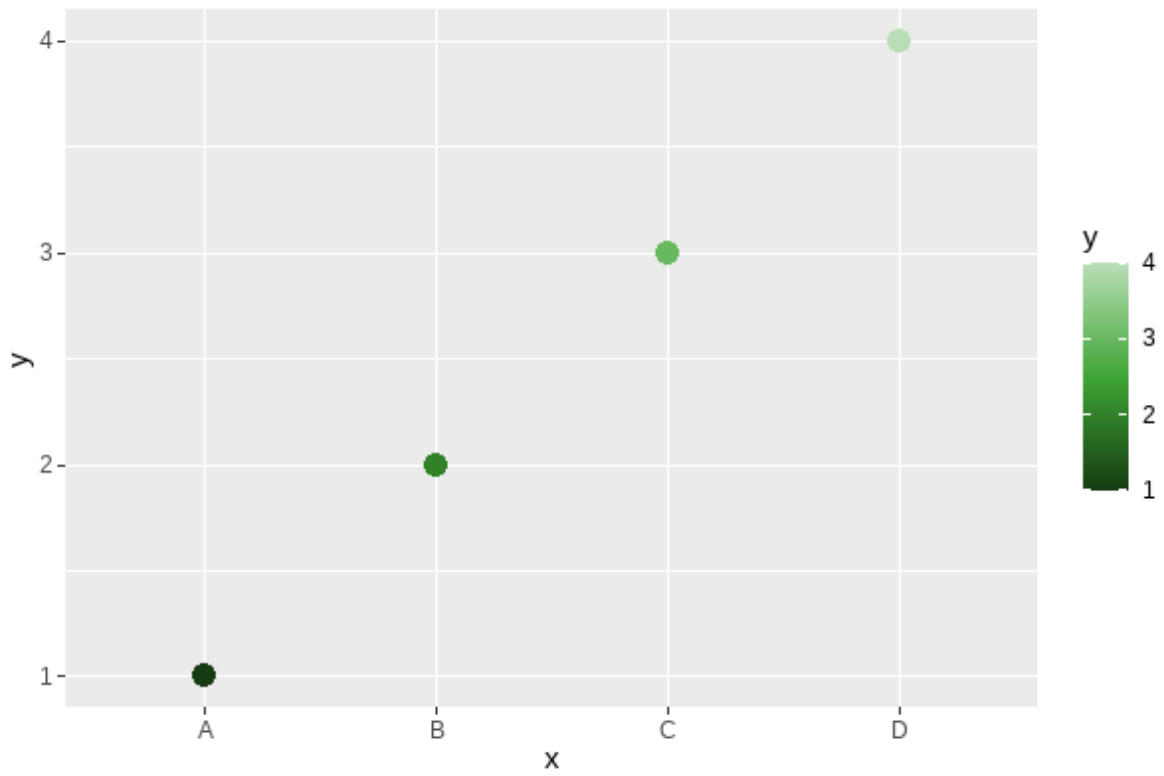


Figure 8:

( ) "signif\_div" .

- ( ) : scale\_fill\_rss\_c()

```
ggplot(data = plot_df,
       mapping = aes(x = x, y = y, fill = y)) +
  geom_col() +
  scale_fill_rss_c(palette = "signif_div")
```

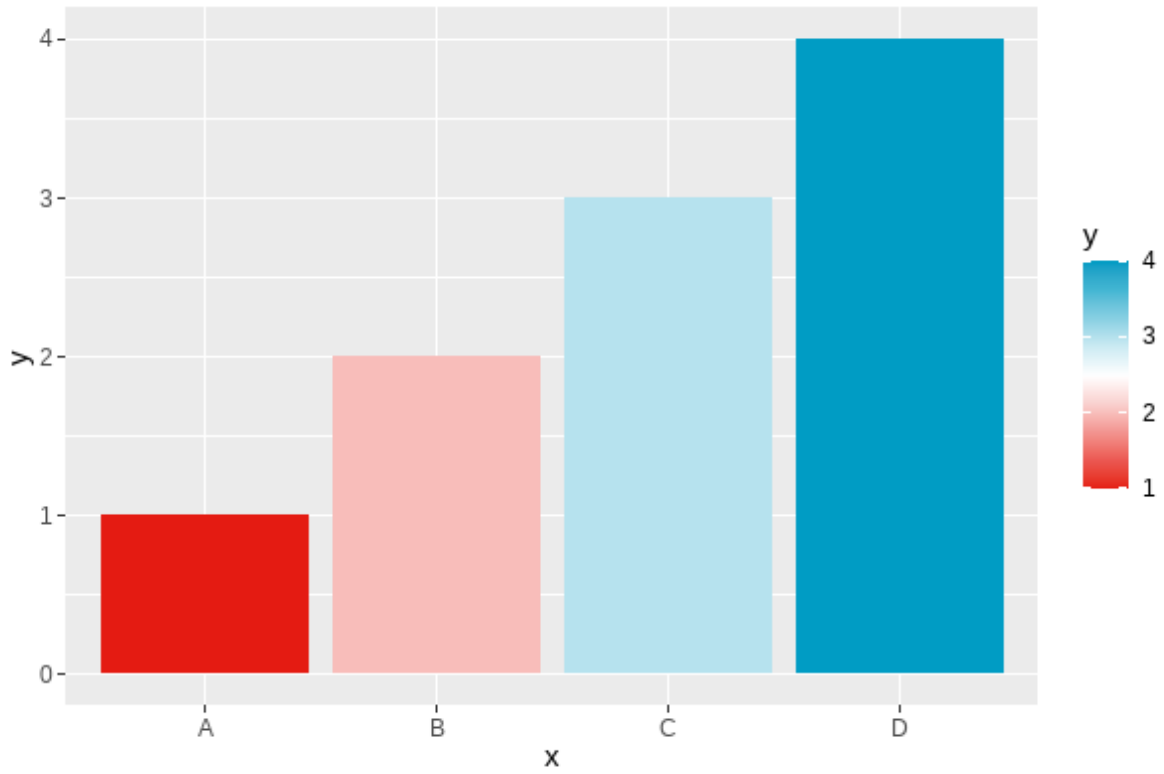


Figure 9:

{RSSthemes} {ggplot2} scale\_fill\_gradient2() :

```
ggplot(data = plot_df,
       mapping = aes(x = x, y = y, fill = y)) +
  geom_col() +
  scale_fill_gradient2(low = signif_red, high = signif_blue, midpoint = 2)
```

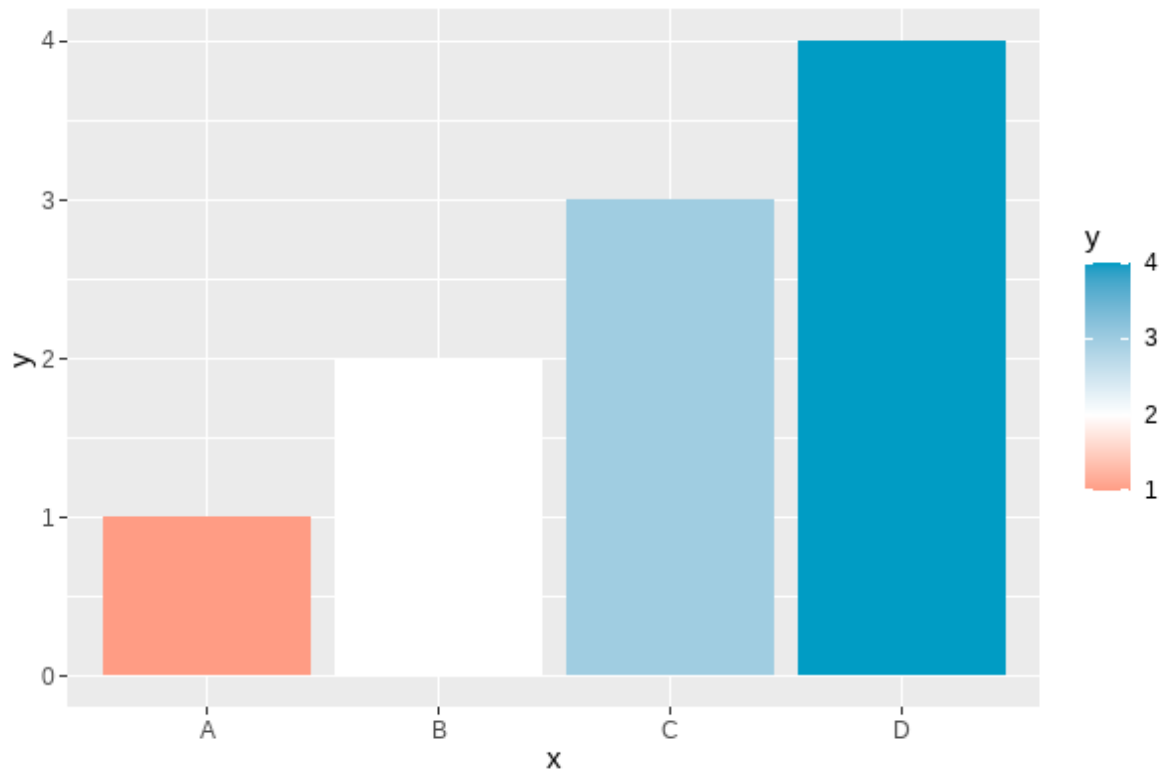


Figure 10: 2

```

: {ggplot2}
{ggplot2} . theme_grey() . theme_minimal()
theme_bw()
{RSSthemes} theme_significance() Significance
library(RSSthemes)

```

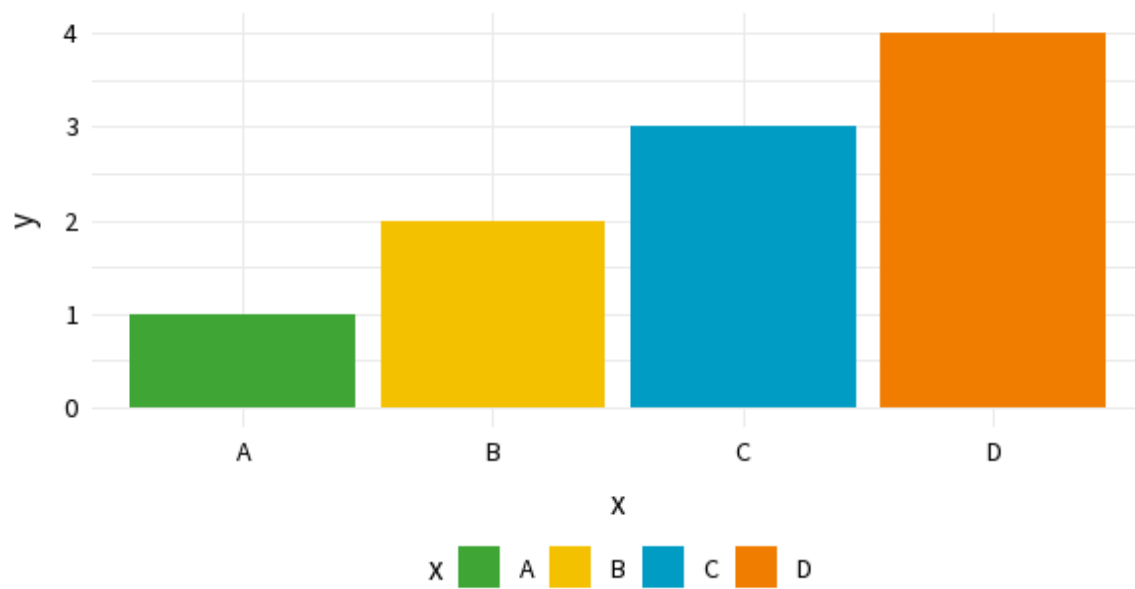
```

ggplot(data = plot_df,
       mapping = aes(x = x, y = y, fill = x)) +
  geom_col() +
  labs(title = " Significance ",
       subtitle = " .",
       caption = " : ") +
  scale_fill_rss_d(palette = "signif_qual") +
  theme_significance()

```

## My Significance Plot

Some longer sentence explaining what is happening in the chart.



Source: name of data source

Figure 11: `theme_significance()`

{RSSthemes}

[GitHub](#)

**R**

R . RStudio *Plots* *Export*  
300 dpi . {ggplot2} ggsave() 300 dpi . PDF EPS

RSS

*Significance* Features 3 2 . 124mm  
pdf() (124mm ~ 4.88 ). 2:1 :

```
pdf(file = "significance-feature-plot.pdf", #
    width = 4.88, #
    height = 4.88 / 2 #
)
```

```
plot(1:4, 1:4)
dev.off()
```

## Python

Python , .  
RSS Python [github.com/nrennie/RSSpythemes](https://github.com/nrennie/RSSpythemes) . Python  
GitHub .

## Matplotlib

Matplotlib , Python .  
: matplotlib .  
color matplotlib :

```
import matplotlib.pyplot as plt
# generate data
x_vals = ['A', 'B', 'C', 'D']
y_vals = [1, 2, 3, 4]
# create barchart
plt.bar(x_vals, y_vals, color = "#009cc4")
plt.show()
```

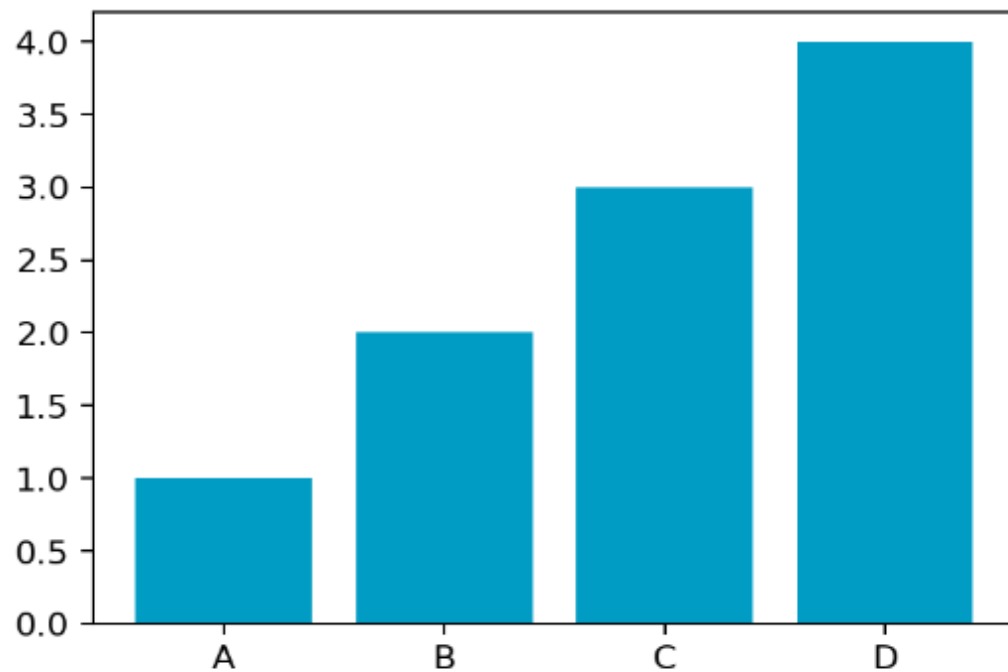


Figure 12: *Significance*

:

```
# define colour palette
signif_qual = ['#3fa535', '#f4c100', '#009cc4', '#f07d00']
# create barchart
plt.bar(x_vals, y_vals, label = x_vals, color = signif_qual)
plt.show()
```

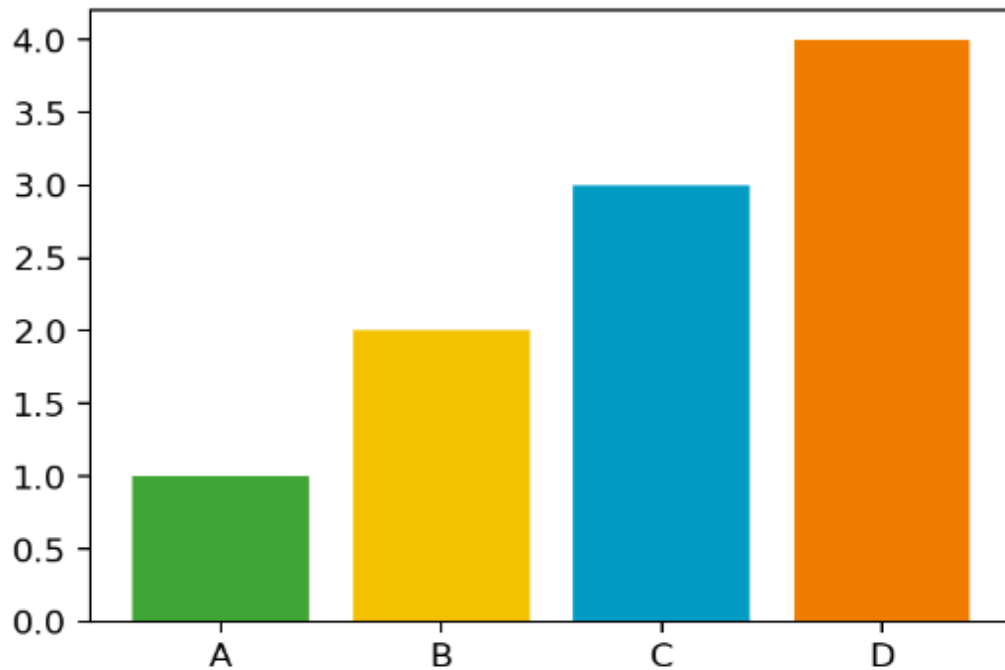


Figure 13: signif\_qual

```
: matplotlib
rcParams
font_manager
```

```
from matplotlib import font_manager
font_manager.fontManager.addfont("SourceSans3-Regular.ttf")
```

```
fontdic
```

```
# define fonts
from matplotlib import rcParams
rcParams['font.family'] = ['Source Sans 3', 'sans-serif']

# create barchart
fig, ax = plt.subplots(1, 1)
plt.bar(x_vals, y_vals, color = signif_qual, label = x_vals)
```

```
plt.title(' Significance ', fontdict = {'fontsize':14}, loc = 'left')
# add grid lines lines
ax.set_axisbelow(True)
ax.xaxis.grid(color = 'lightgrey')
ax.yaxis.grid(color = 'lightgrey')
# add legend below plot
ax.legend(ncol = 4, loc = 'lower center',
          bbox_to_anchor = (0.5, -0.15), frameon = False)
plt.show()
```

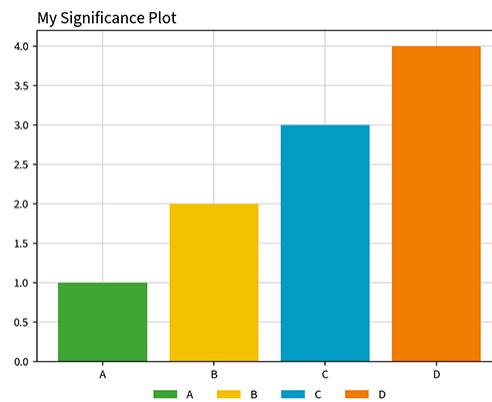


Figure 14: Source Sans

## Julia

Julia . Julia .

## Makie

Makie Julia .

: Makie .

Makie color axis xticks :

```
using CairoMakie
# generate data
x_vals = [1, 2, 3, 4]
y_vals = [1, 2, 3, 4]
```



```
# create barchart
barplot(x_vals, y_vals, color="#009cc4", axis=(; xticks=(1:4, ["A", "B", "C", "D"])))
```

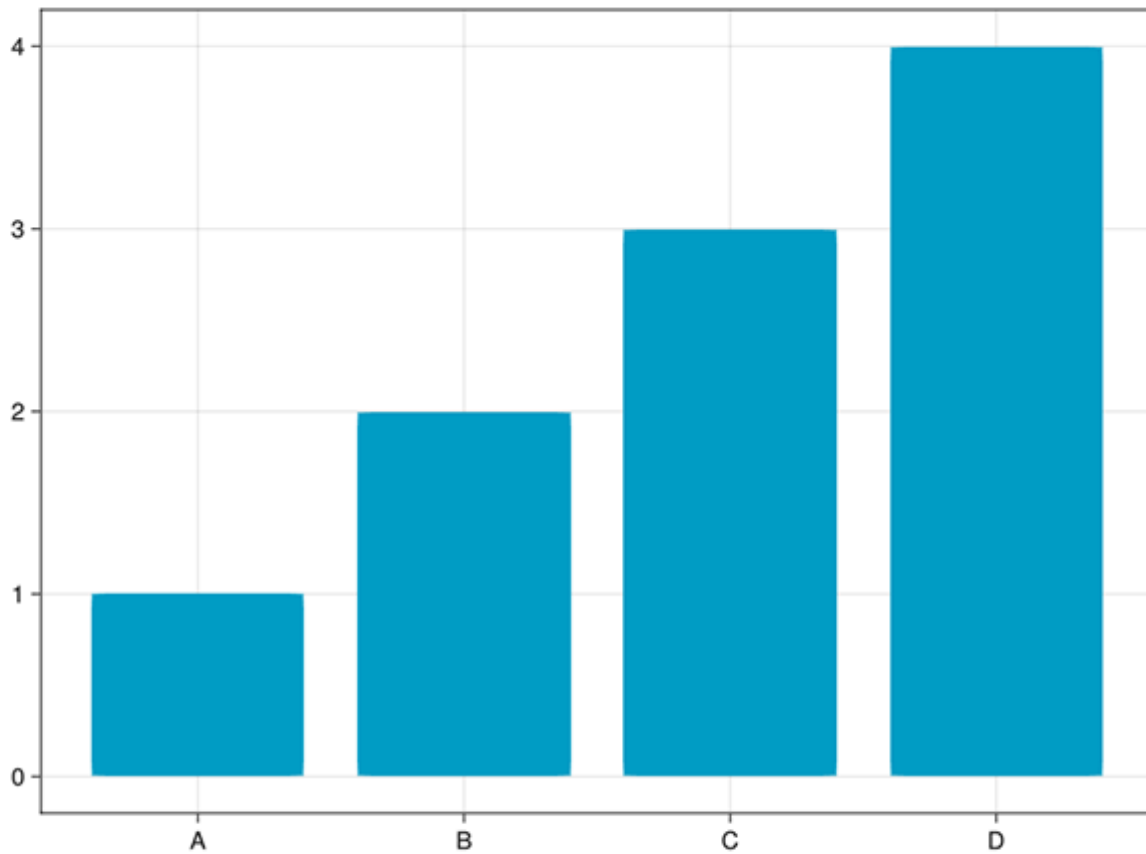


Figure 15: *Significance*

:

```
# define colour palette
signif_qual = ["#3fa535", "#f4c100", "#009cc4", "#f07d00"]
# create barchart
barplot(x_vals, y_vals, color=signif_qual, axis=(; xticks=(1:4, ["A", "B", "C", "D"])))
```

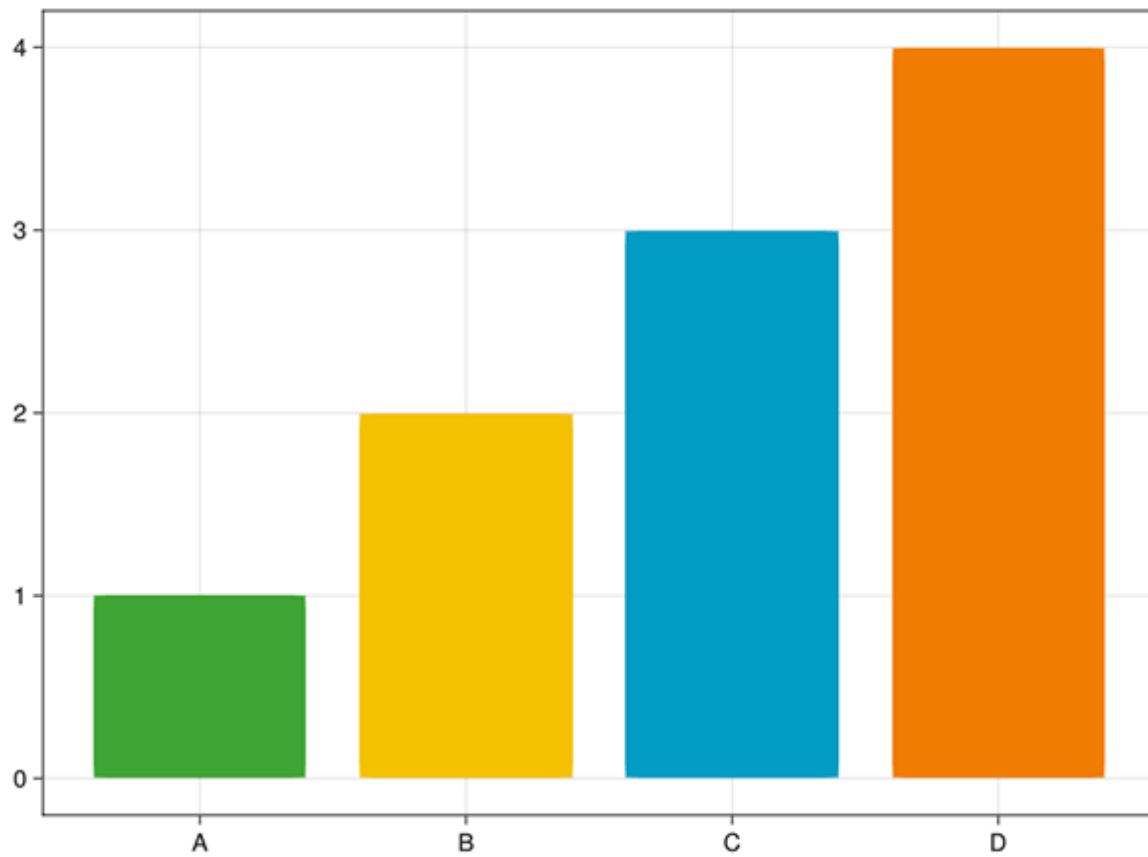


Figure 16: signif\_qual

axis :

```
# define labels and title
title = " Significance "
subtitle = " ."
xlabel = "X "
ylabel = "Y "

# create barchart
barplot(x_vals,
        y_vals;
        color=signif_qual,
        axis=(;
            xticks=(1:4, ["A", "B", "C", "D"]),
            title=title,
```

```

        subtitle=subtitle,
        titlealign=:left,
        xlabel=xlabel,
        ylabel=ylabel,
    ),
)

```

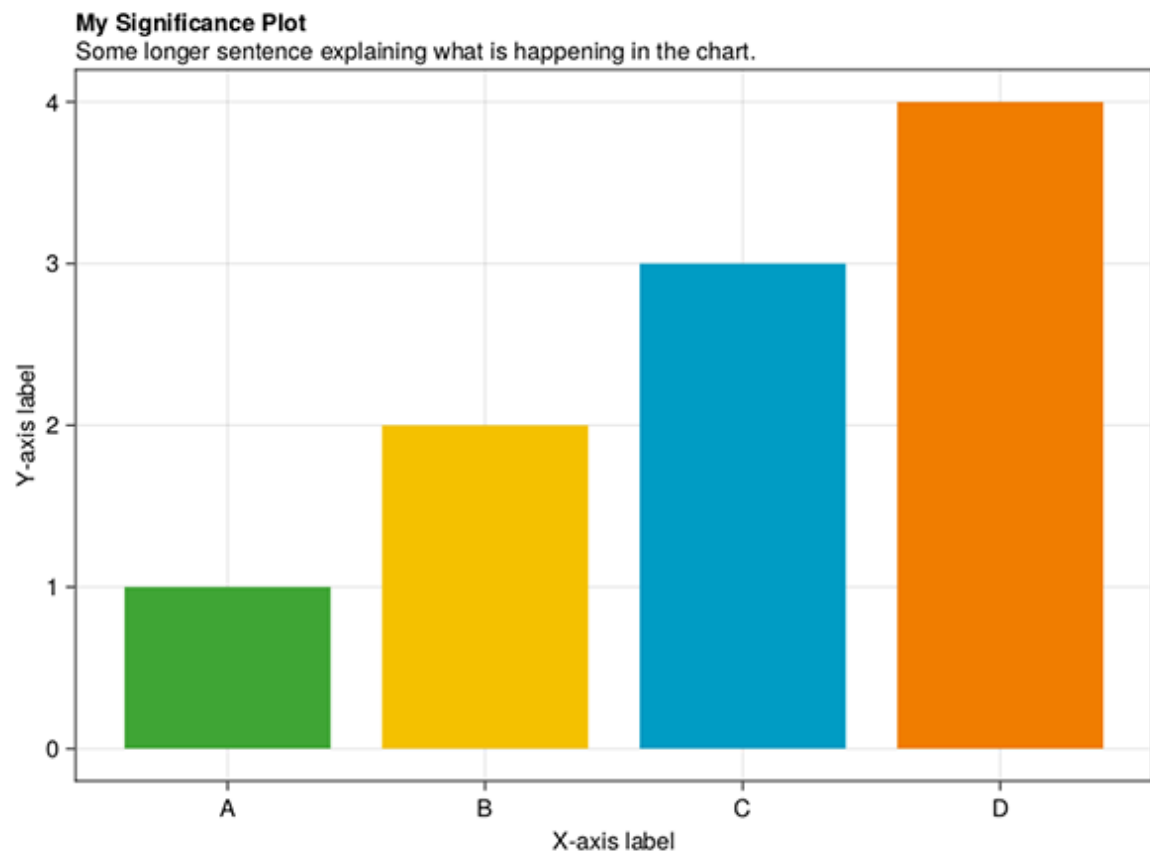


Figure 17:

### AlgebraOfGraphics

[AlgebraOfGraphics](#) [Makie](#) [Julia](#) . R [ggplot2](#) .  
: AlgebraOfGraphics .  
Makie color axis xticks :

```

using AlgebraOfGraphics
using CairoMakie
# generate data
x_vals = [1, 2, 3, 4]
y_vals = [1, 2, 3, 4]
# create barchart
plt = data(; x_vals, y_vals) * mapping(:x_vals, :y_vals) * visual(BarPlot; color="#009cc4")
draw(plt; axis=(; xticks=(1:4, ["A", "B", "C", "D"])))

```

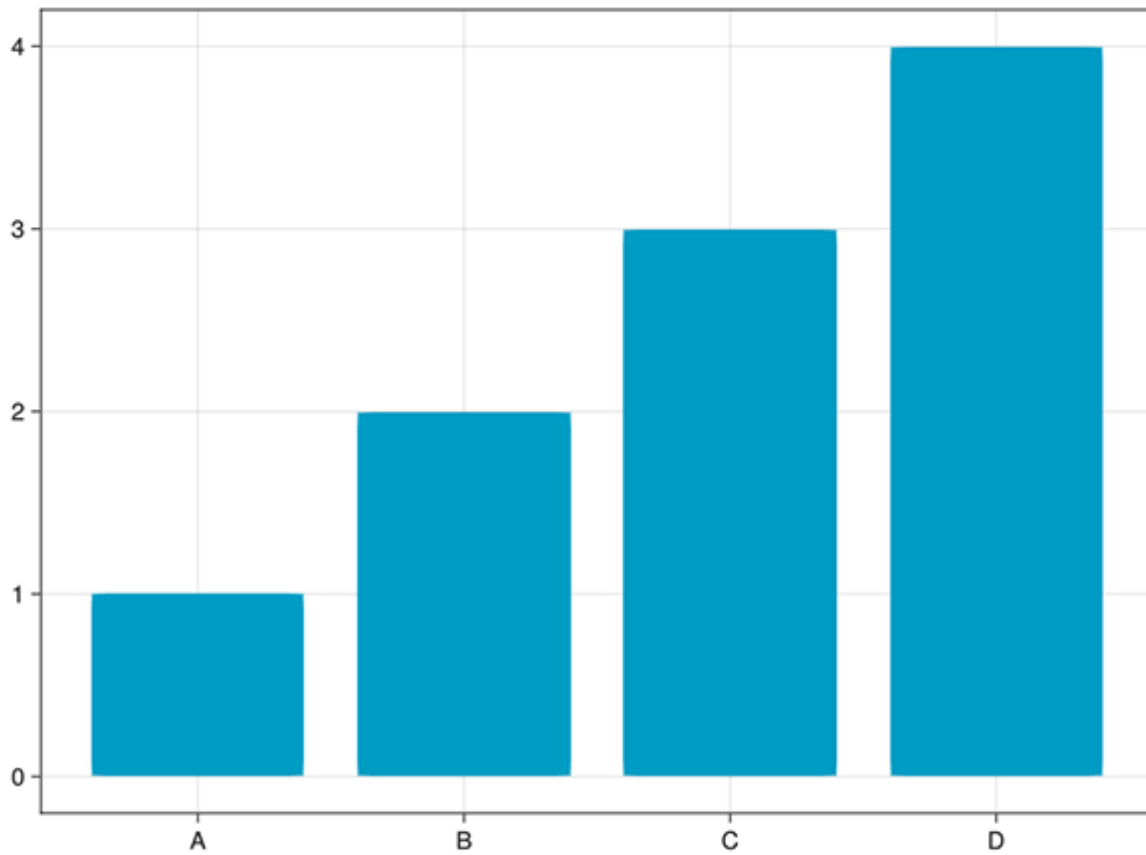


Figure 18: *Significance*

:

```

# define colour palette
signif_qual = ["#3fa535", "#f4c100", "#009cc4", "#f07d00"]
# create barchart

```

```
plt = data(;; x_vals, y_vals) * mapping(:x_vals, :y_vals) * visual(BarPlot; color=signif_qual)
draw(plt; axis=(; xticks=(1:4, ["A", "B", "C", "D"])))
```

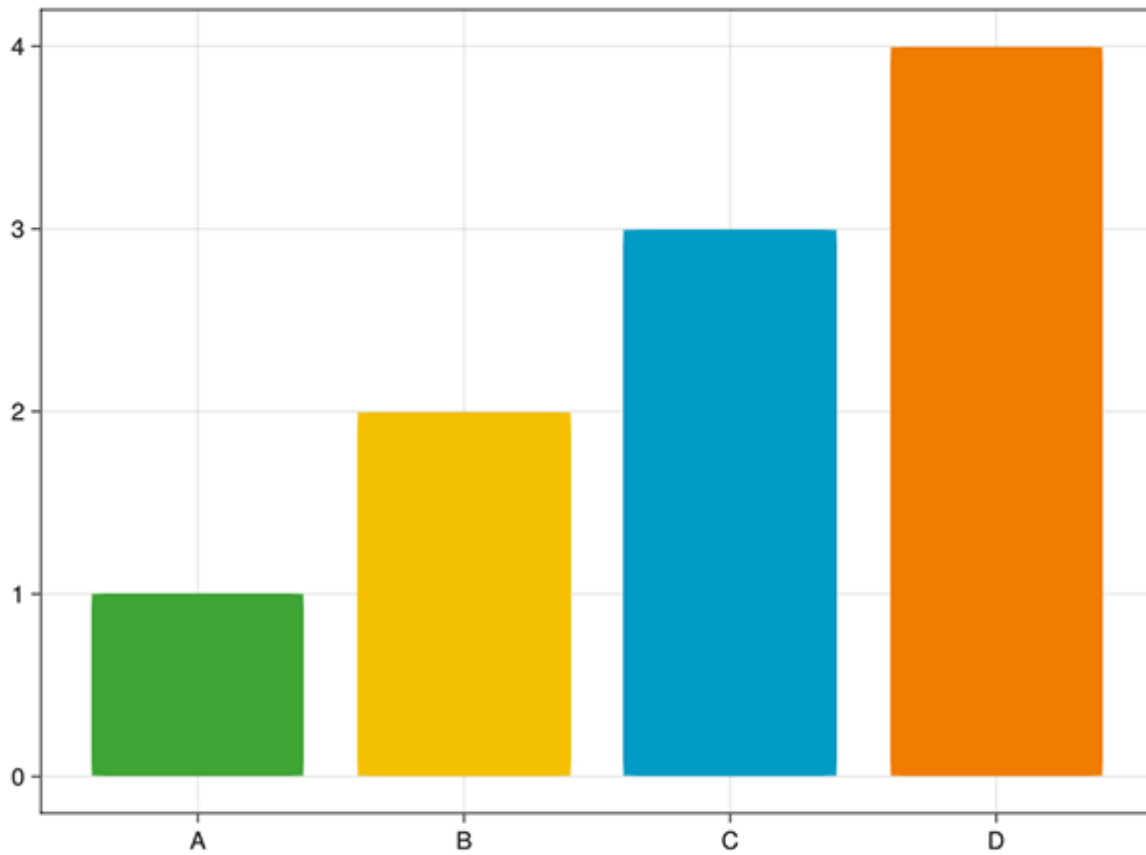


Figure 19: signif\_qual

```
axis      :
```

```
# define labels and title
title = " Significance "
subtitle = " ."
xlabel = "X  "
ylabel = "Y  "

# create barchart
draw(plt;
    axis=(;
```

```

xticks=(1:4, ["A", "B", "C", "D"]),
title=title,
subtitle=subtitle,
titlealign=:left,
xlabel=xlabel,
ylabel=ylabel,
),
)

```

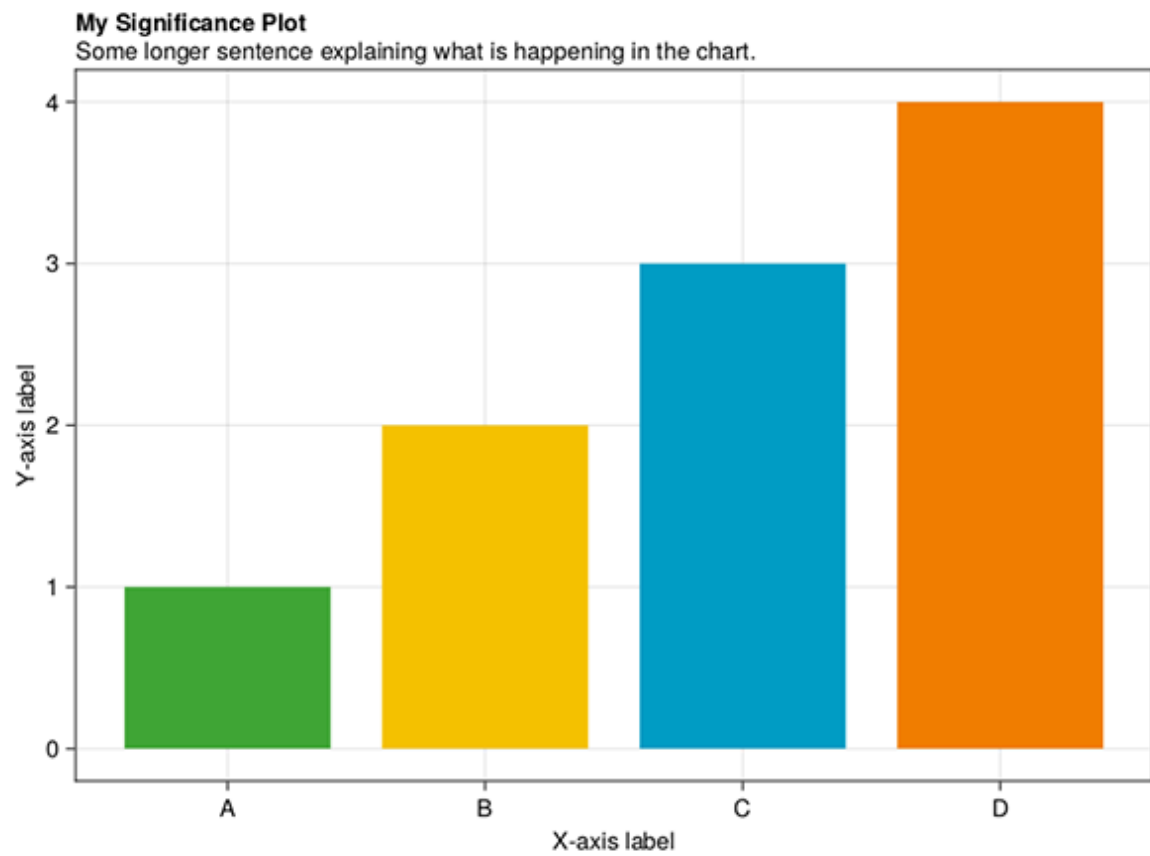


Figure 20:

RSS

## Significance Magazine

---

(W) 212.55 mm x (H) 263.65 mm  
(W) 188 mm x (H) 212 mm  
300 dpi (    )  
jpeg, png

---

## Notebook

4                    .

---

1x	45 mm
2x	93 mm
3x	140 mm
4x	188 mm

Meta Serif OT, Book  
8.5 pt  
:  
(RSSthemes      signif\_red    )

- CMYK = 0, 96, 98, 1
- RGB = 228, 27, 18
- Hex code = #e41b12

---

## Features

3                    .

---

1x	60 mm
2x	124 mm
3x	188 mm

Source Sans Pro, Regular  
9 pt

---

	:
	(RSSthemes    signif_green   )
	<ul style="list-style-type: none"> <li>• CMYK = 75, 5, 100, 0</li> <li>• RGB = 63, 165, 53</li> <li>• Hex code = #3fa535</li> </ul>

---

**Profiles / Perspectives / Statscom**

3	.
---	---

---

1x	60 mm
2x	124 mm
3x	188 mm
	Meta Serif OT, Book
	8.5 pt
:	
Profiles	:
	(RSSthemes    signif_blue   )
	<ul style="list-style-type: none"> <li>• CMYK = 78, 19, 15, 1</li> <li>• RGB = 0, 156, 196</li> <li>• Hex code = #009cc4</li> </ul>
Perspectives	:
	(RSSthemes    signif_yellow   )
	<ul style="list-style-type: none"> <li>• CMYK = 5, 24, 95, 1</li> <li>• RGB = 244, 193, 0</li> <li>• Hex code = #f4c100</li> </ul>



---

```
Statscomm      :
```

```
(RSSthemes     signif_orange )
```

- CMYK = 0, 60, 99, 0
- RGB = 240, 125, 0
- Hex code = #f07d00

---

## Journal of the Royal Statistical Society Series A

---

```
(W) 189 mm x (H) 246 mm
(W) 136 mm x (H) 217 mm
Sabon LT Std Roman
9.25 pt
300 dpi (    )
jpeg, png
```

---

R Core Team. 2021. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.

“Styling Base r Graphics.” 2018. Jumping Rivers. 2018. <https://www.jumpingrivers.com/blog/styling-base-r-graphics/>.

Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. <https://ggplot2.tidyverse.org>.