PPGCOMP - FURG | 23148P - Data Visualization and Exploratory Data Analysis | 02/2024

This notebook contains the solution for Task 02 of the course 23148P - Data Visualization and Exploratory Data Analysis - 02/2024 of the Graduate Program in Computing at FURG (PPGCOMP-FURG).

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The repository with the notebooks can be accessed here!

Task

Considering our first data set, about the number of Brazilian Championships create the R code necessary to produce the most similar possible graph to the one available here!

Note that you'll have to update the original csv file adding the state of each national team.

Solution

> Install packeges R:

In [1]:
```
if (!requireNamespace("ggplot2", quietly = TRUE)) install.packages("ggplot2")
if (!requireNamespace("tidyverse", quietly = TRUE)) install.packages("tidyverse")
if (!requireNamespace("RColorBrewer", quietly = TRUE)) install.packages("RColorBrewer")
```

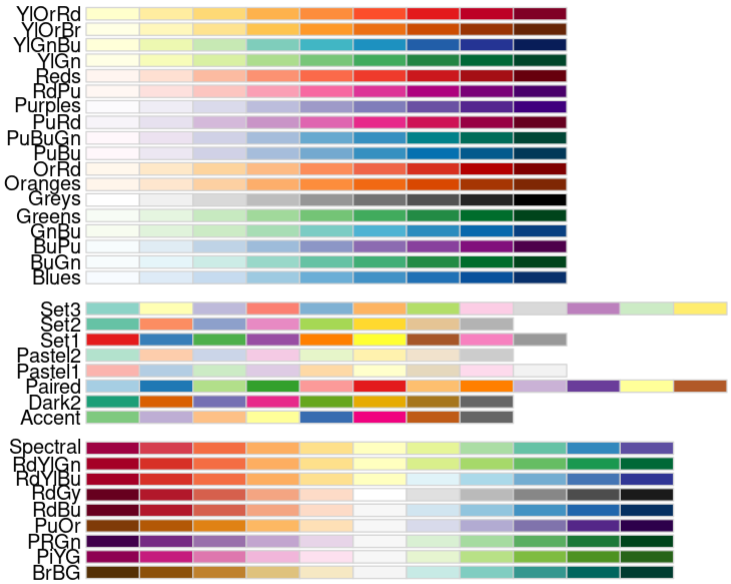
> Import librarys R:

In [2]:
```
library(ggplot2)
library(tidyverse)
library(RColorBrewer)
```

```
── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──
✔ dplyr     1.1.4     ✔ readr     2.1.5
✔ forcats   1.0.0     ✔ stringr   1.5.1
✔ lubridate 1.9.3     ✔ tibble    3.2.1
✔ purrr     1.0.2     ✔ tidyr     1.3.1
── Conflicts ────────────────────────────────────────── tidyverse_conflicts() ──
✖ dplyr::filter() masks stats::filter()
✖ dplyr::lag()    masks stats::lag()
ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

> Check colors:

In [3]:
```
display.brewer.all()
```



> Cleaning workspace:

In [4]:
```
rm(list = ls())
```

> Import dataset:

In [5]:
```
my.data <- data.frame(read.csv("./campeoes.csv"))
```

> Reorganizing dataset:

In [6]:
```
my.data.all <- cbind(my.data, Estado = c("SP", "SP", "RJ", "SP", "SP", "MG", "RJ", "RJ", "MG", "RS", "BA", "RJ", "RS",
                                         "PR", "PR", "SP", "PE"))
```

> Plotting data:

In [7]:
```
ggplot(my.data.all, aes(x = reorder(Time,+Titulos), y = Titulos, fill = Estado)) +
  geom_bar(stat = "identity") +
  coord_flip() +
  scale_fill_manual(values = c("BA" = "red", "MG" = "#1166bf", "PE" = "#44BB34", "PR" = "#bb1199",
                               "RJ" = "darkorange", "RS" = "#FFFF33", "SP" = "#AA4000")) +
  labs(title = "Campeonato Brasileiro", x = "", y = "Nro de Títulos") +
  scale_y_continuous(breaks = seq(0, 12, by = 2)) +
  theme_minimal() +
  theme(
    text = element_text(size = 18),
    panel.grid.major.y = element_blank(),
    panel.grid.minor.y = element_blank()
  )
```