

The amazing ggplot2

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8/28/2020

```
library(tidyverse)

## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## vforcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.1     v tibble    3.2.1
## v lubridate 1.9.3     v tidyrr    1.3.1
## v purrr    1.0.2

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()   masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors

library(ggtext) # for text on plot
library(forcats) # for fct_reorder
library(png) # for image as background
library(grid) # for image as background
library(jpeg)
```

This document is to show you how much you can do with just a few extra lines. The first example will take some time to compile and for the 2. you will need to download this image (https://media2.fdncms.com/orlando/imager/u/original/14977752/gal_jaws.jpg) and name it shark_background.png and place it in the same folder as the RMD. At the bottom of the RMD there are a few links for inspiration.

Iris with image as label.

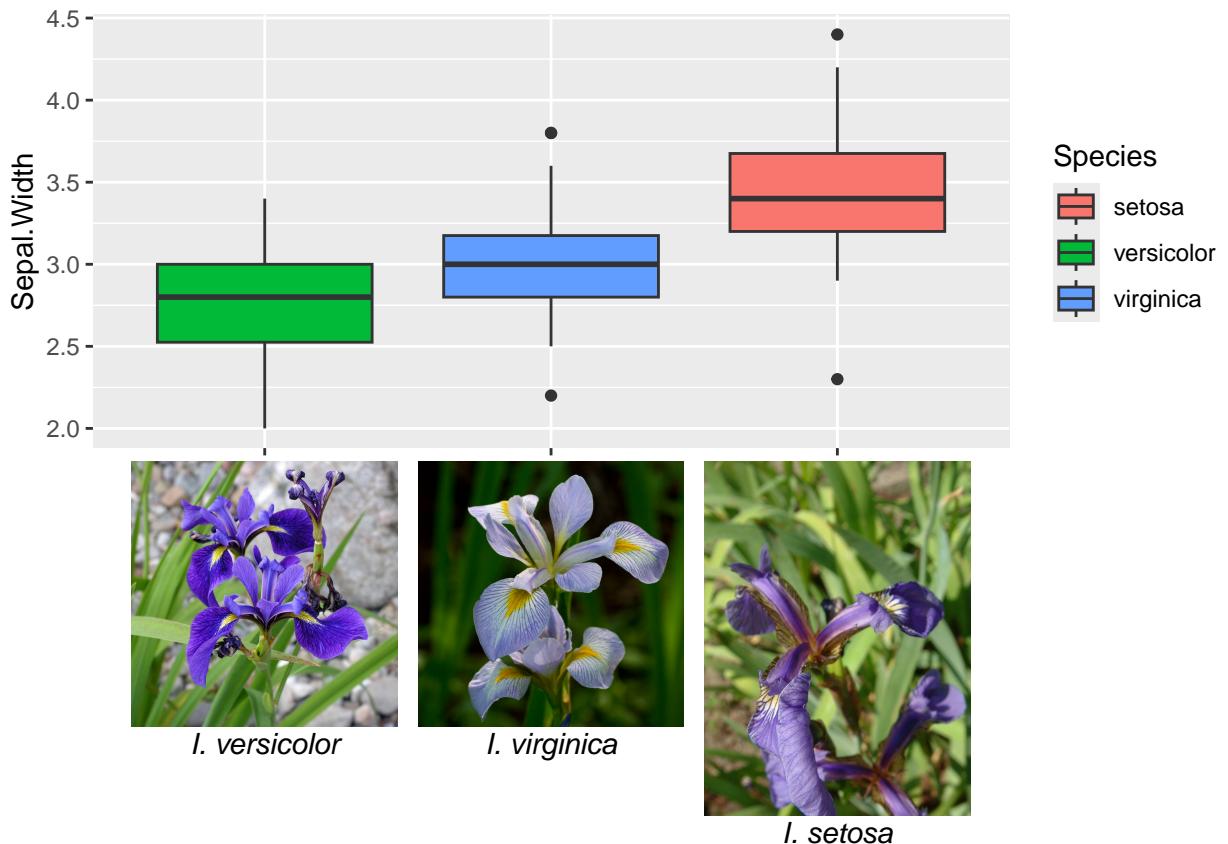
```
labels <- c(
  versicolor = "<img src ='https://upload.wikimedia.org/wikipedia/commons/2/27/Blue_Flag%2C_Ottawa.jpg' width='100' /><br>*I. versicolor*",
  virginica = "<img src ='https://upload.wikimedia.org/wikipedia/commons/f/f8/Iris_virginica_2.jpg' width='100' /><br>*I. virginica*",
  setosa = "<img src='https://upload.wikimedia.org/wikipedia/commons/thumb/5/56/Kosaciec_szczecinkowaty.jpg' width='100' /><br>*I. setosa*"
) # This is a vector of the URL for the pictures. size and title is added by the end.

ggplot(data = iris) +
  geom_boxplot(mapping = aes(x = fct_reorder(Species, Sepal.Width), y = Sepal.Width, fill = Species))
  scale_x_discrete()
```

```

    name = NULL,
    labels = labels # Here we add the images.
) +
theme(
  axis.text.x = element_markdown(color = "black", size = 11)
)

```



add image to plot

To add a background to the plot we need to combine the annotation_custom-function of the ggplot2 package and the rasterGrob-function of the grid package.

With

```

url = 'https://upload.wikimedia.org/wikipedia/commons/2/27/Blue_Flag%2C_Ottawa.jpg'
download.file(url, destfile = "versicolor.jpg", mode = 'wb')

versicolor <- jpeg::readJPEG("versicolor.jpg")

ggplot(data = iris) +
  ggtitle("Iris flowers") + # add title
  annotation_custom(rasterGrob(versicolor, #Choose picture
                               width = unit(1,"npc"), #Scale picture
                               height = unit(1,"npc"))), #Scale picture

```

```
-Inf, Inf, -Inf, Inf) + #Placement of picture  
geom_boxplot(mapping = aes(x = Species, y = Sepal.Width, fill = Species))
```

