

# Welcome to Week 4!



1. Sign in here: <https://tinyurl.com/bootcamp-session4-signin> or here
2. Make sure you have the session 4 practice materials downloaded from the webpage: <https://tinyurl.com/rbootcamp2024>
3. Open up `s4_starter-code_2024.R` in R Studio



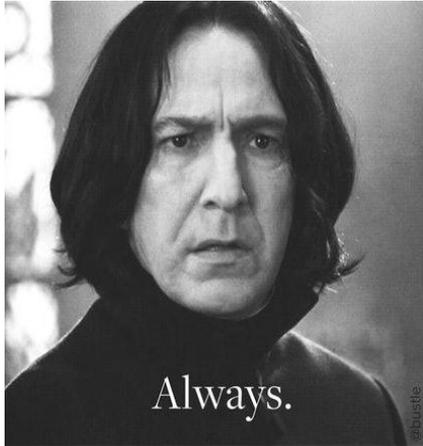
# Week 4: Data Visualization

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7/11/2024

# Today's agenda

-  Warm-up
-  Introduction to ggplot
-  Demo: Plotting and data reshaping
-  Individual Practice - Data visualization
-  Discussion - Present plots

# When do you visualize your data?



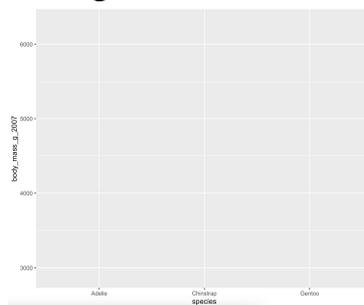


# Build any plot with ggplot

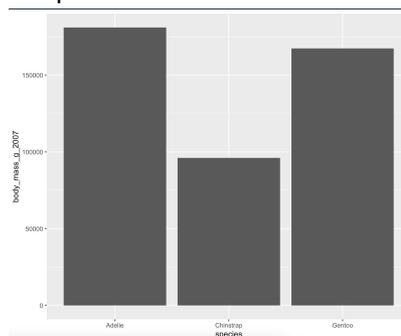
We can combine steps together in ggplot to create a plot.

You can think of each element of your plot as a layer that you can build up. This is what makes ggplot so flexible!

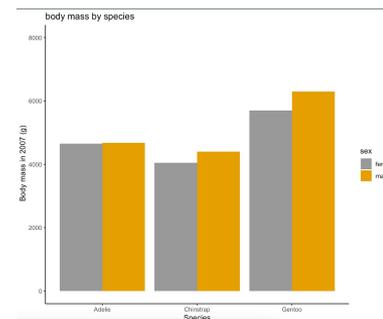
Step 1: create a plot and designate variables



Step 2: Decide how to represent the data



Step 3: customize



# ggplot terminology

1. Create a ggplot object

```
ggplot(data = myDataFrame, aes(x = xaxis_values, y = yaxis_values))
```

*aesthetic mapping: Tell ggplot how to map the variables in your dataframe to visual properties. (ie how do you want to arrange the data).*

1. Add geometric objects to your plot. These tell ggplot how to represent your data.

```
ggplot(data = myDataFrame, aes(x = xaxis_values, y = yaxis_values)) +  
  geom_col()
```

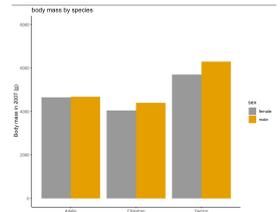
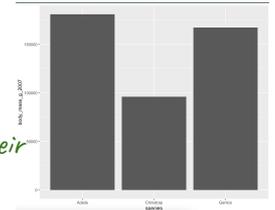
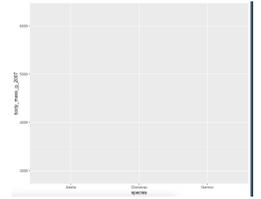
```
  geom_point(color = "dark gray")
```

*Notice "+" not "%>%" connects ggplot objects together*

1. Add other layout and design features

```
  theme_classic()
```

*geoms can also contain additional data and/or their own aesthetic mappings*



# Group Activity

## Activity Instructions:

[https://drive.google.com/file/d/1uyHQ9zUYkLvwnAYa350JqkISOvYxZfVd/view?usp=drive\\_link](https://drive.google.com/file/d/1uyHQ9zUYkLvwnAYa350JqkISOvYxZfVd/view?usp=drive_link)

## Jamboard to share plots:

[https://jamboard.google.com/d/1A-dAAGbepCAi6qUuECM4M6ubSLvDap0vi8QgmIMB5rw/edit?usp=drive\\_link](https://jamboard.google.com/d/1A-dAAGbepCAi6qUuECM4M6ubSLvDap0vi8QgmIMB5rw/edit?usp=drive_link)



Allison Horst

at first I was like...



...but now it's like...



Allison Horst