Annotation_layer_in_R

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```
install.packages("tidyverse")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.3'
## (as 'lib' is unspecified)
```

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.2     v readr     2.1.4
## v forcats   1.0.0     v stringr   1.5.0
## v ggplot2   3.4.2     v tibble    3.2.1
## v lubridate 1.9.2     v tidyr     1.3.0
## 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
```

```
install.packages("palmerpenguins")
```

```
## Installing package into '/cloud/lib/x86_64-pc-linux-gnu-library/4.3'
## (as 'lib' is unspecified)
```

```
library(palmerpenguins)
```

```
data("penguins")
```

R *label* function

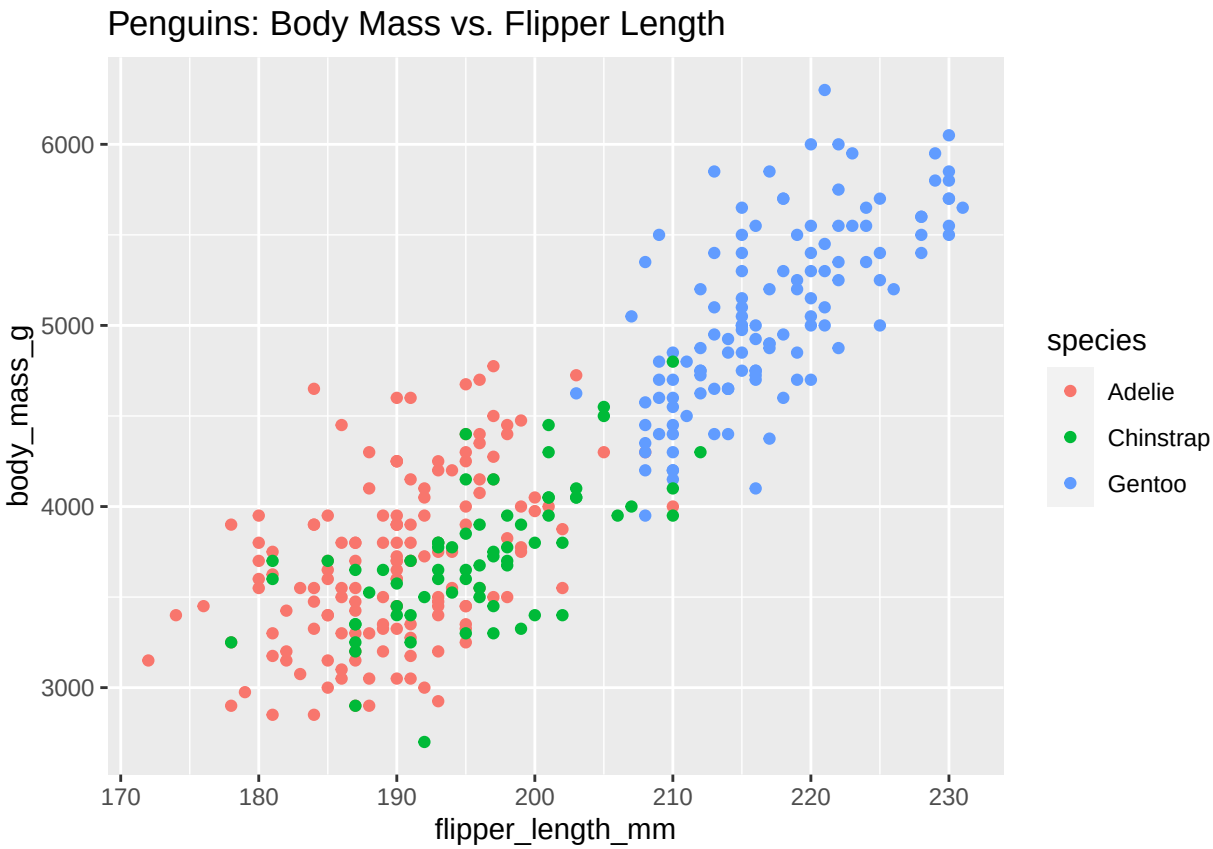
We can add a title to our plot that shows the relationship between body mass and flipper length for the three penguin species.

title

First, we add a plus sign to add a new layer to our plot. Next in the parentheses, following the label function, we write the word title, then an equal sign than the specific text we want in our title.

```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, color = species))+
  labs(title = "Penguins: Body Mass vs. Flipper Length")
```

```
## Warning: Removed 2 rows containing missing values (`geom_point()`).
```

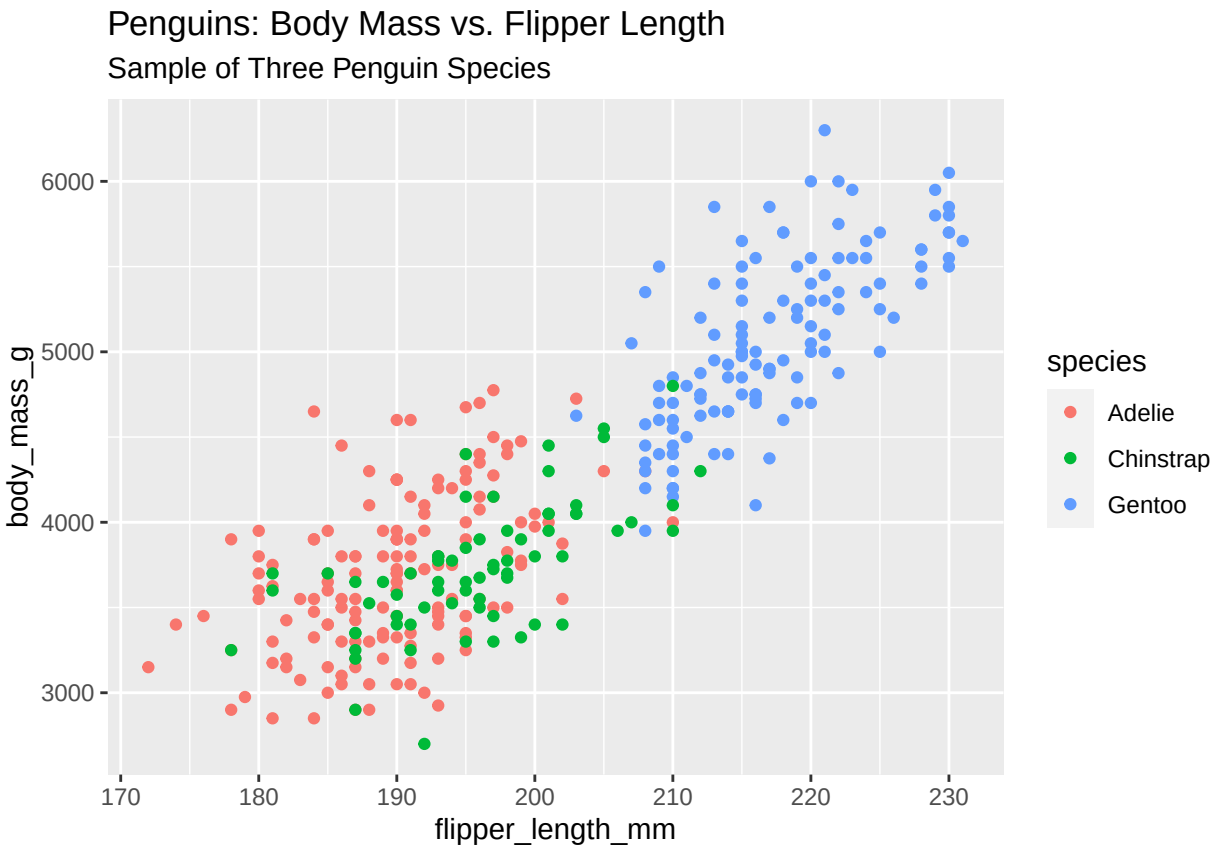


subtitle

We can also add a subtitle to our plot to highlight important information about our data. To do this, we enter the code for a subtitle in the same way as a title. Remember to add a comma after the title argument before you enter your subtitle.

```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, color = species))+
  labs(title = "Penguins: Body Mass vs. Flipper Length", subtitle = "Sample of Three Penguin Species")
```

```
## Warning: Removed 2 rows containing missing values (`geom_point()`).
```

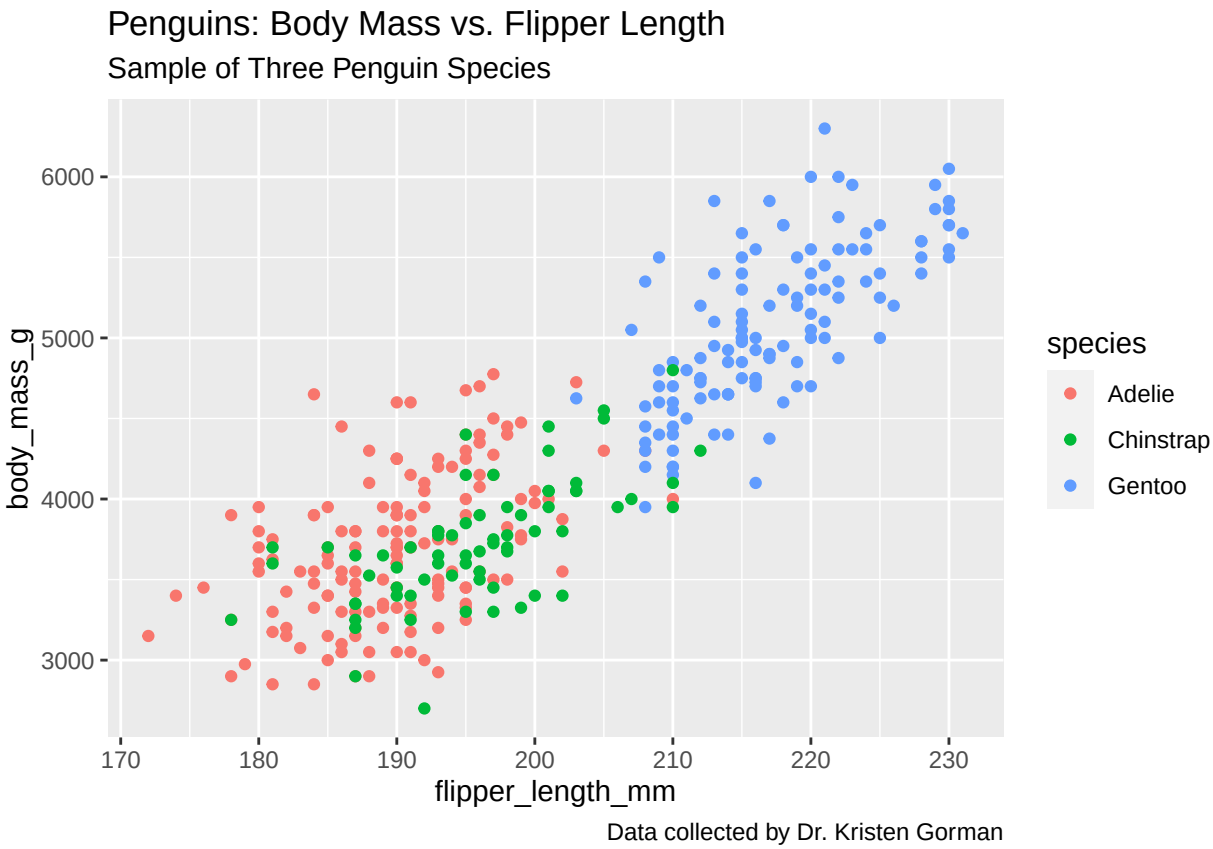


caption

We can add a caption to our plot in the same way. Captions let us show the source of our data. R automatically displays the caption at the bottom right of our plot.

```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, color = species))+
  labs(title = "Penguins: Body Mass vs. Flipper Length", subtitle = "Sample of Three Penguin Species",
  caption = "Data collected by Dr. Kristen Gorman")
```

```
## Warning: Removed 2 rows containing missing values (`geom_point()`).
```



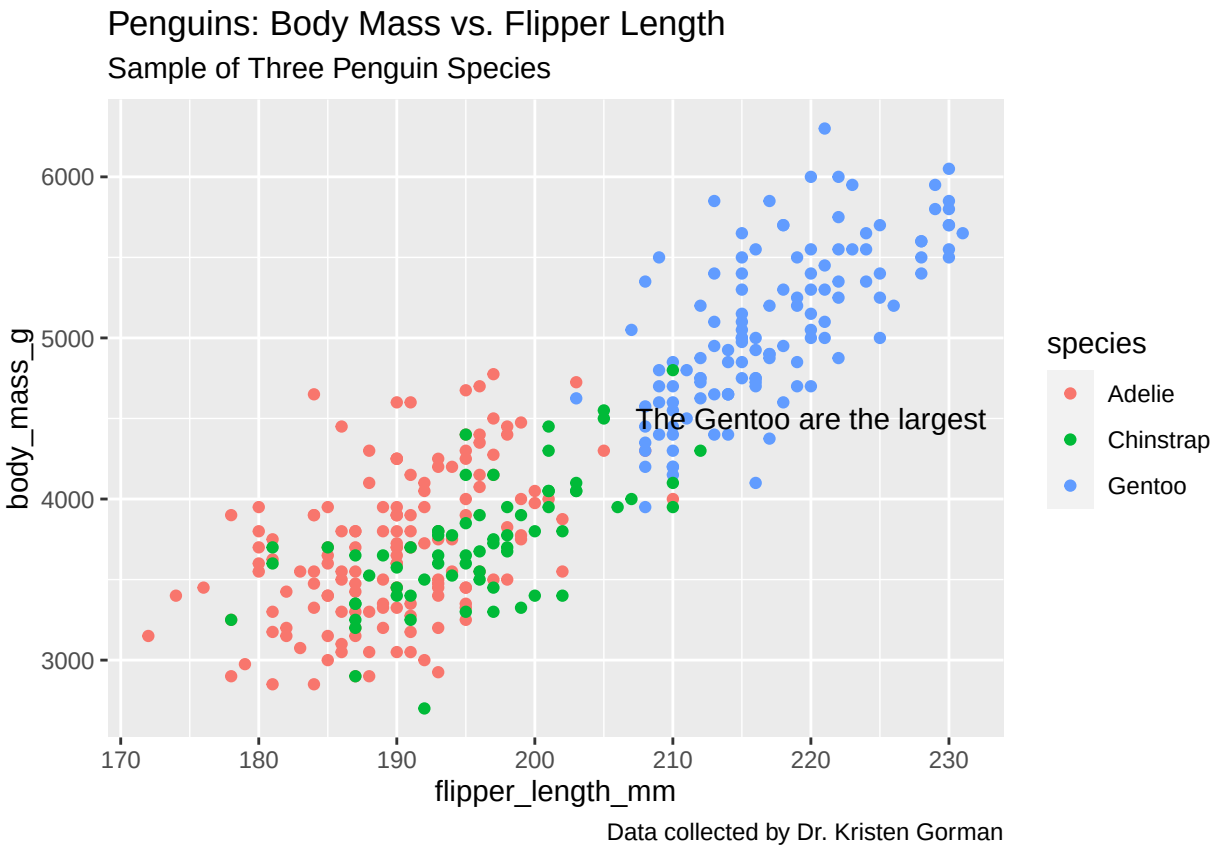
R *annotate* function

text label

If we want to put text inside the grid to call out specific data points, we can use the annotate function. In the parentheses of the annotate function, we've got information on the type of label, the specific location of the label and the context of the label.

```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, color = species))+
  labs(title = "Penguins: Body Mass vs. Flipper Length", subtitle = "Sample of Three Penguin Species",
       caption = "Data collected by Dr. Kristen Gorman")+
  annotate("text", x = 220,y = 4500, label = "The Gentoo are the largest")
```

```
## Warning: Removed 2 rows containing missing values (`geom_point()`).
```

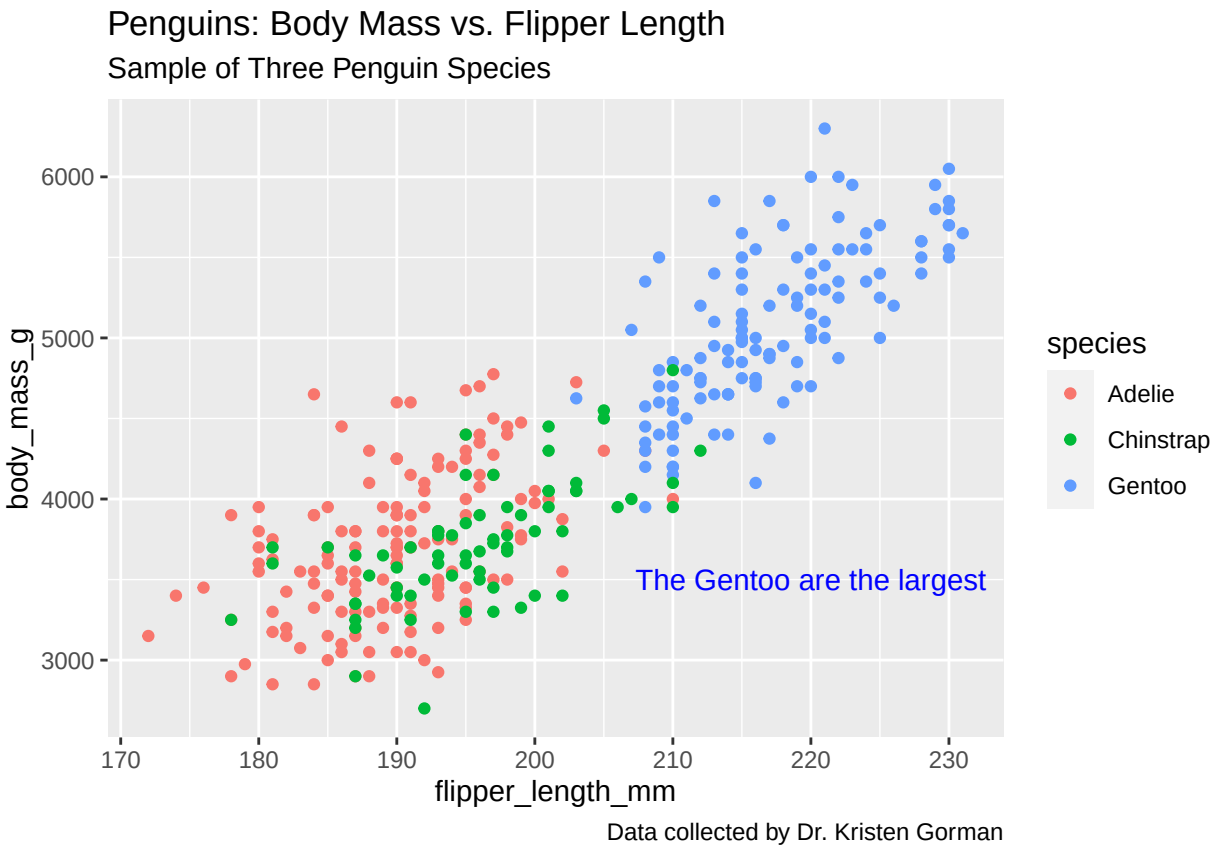


changing the color of our text

We can customize our annotation even more. Let's say we want to change the color of our text. Well, we can add color equals followed by the name of the color.

```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, color = species))+
  labs(title = "Penguins: Body Mass vs. Flipper Length", subtitle = "Sample of Three Penguin Species",
       caption = "Data collected by Dr. Kristen Gorman")+
  annotate("text", x = 220,y = 3500, label = "The Gentoo are the largest", color = "blue")
```

```
## Warning: Removed 2 rows containing missing values (`geom_point()`).
```

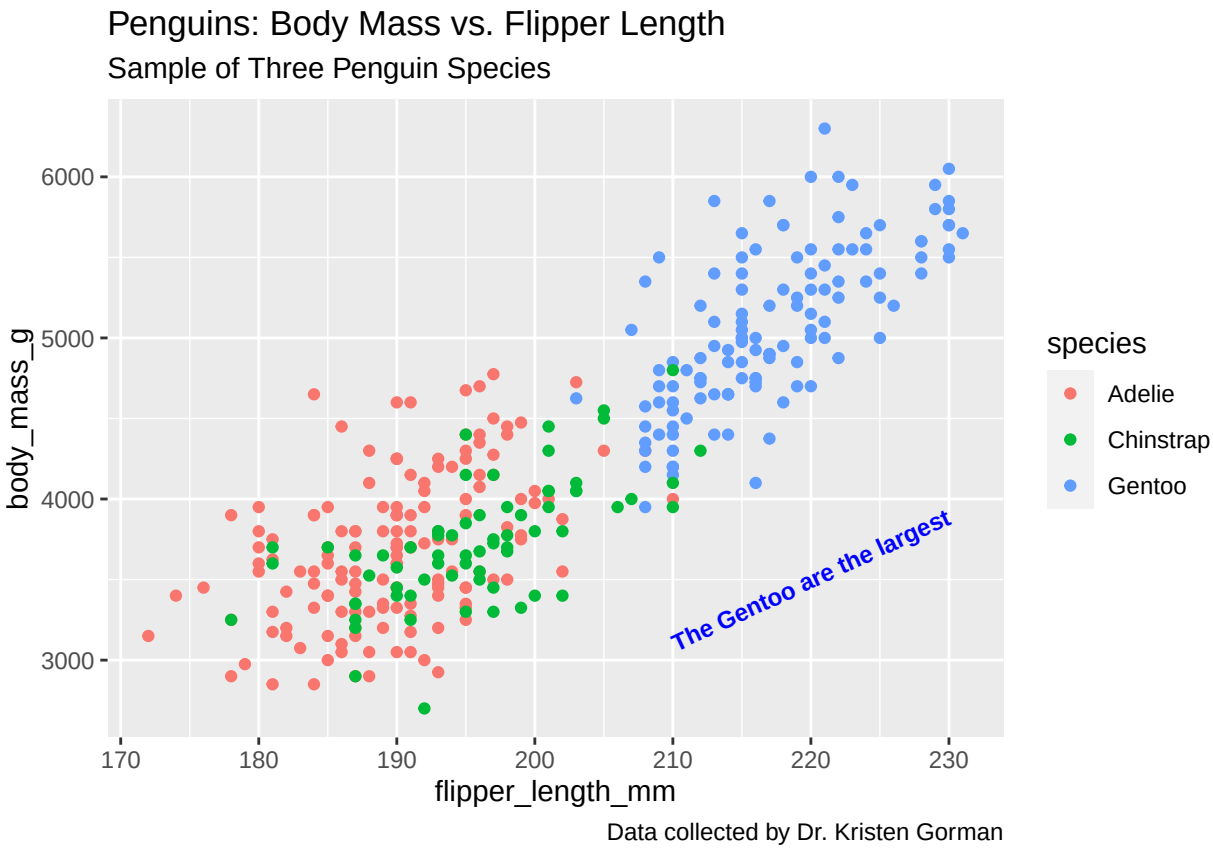


changing the angle of our text

We can even change the angle of our text. For example, we can tilt our text at a 25 degree angle to line it up with our data points.

```
ggplot(data = penguins) +
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, color = species))+
  labs(title = "Penguins: Body Mass vs. Flipper Length", subtitle = "Sample of Three Penguin Species",
       caption = "Data collected by Dr. Kristen Gorman")+
  annotate("text", x = 220,y = 3500, label = "The Gentoo are the largest",
           color = "blue", fontface = "bold", size = 3.0, angle = 25)
```

```
## Warning: Removed 2 rows containing missing values (`geom_point()`).
```



Conclusion

Labels and annotations can be really helpful when it comes to highlighting important parts of your data and communicating key points.