Hello, Penguins!

Introduction

Data

For this analysis we'll use the `penguins` dataset from the **palmerpenguins** package.(Gorman, Williams, and Fraser 2014)

```
library(tidyverse)
library(ggthemes)
library(palmerpenguins)
library(gt)
```

```
glimpse(penguins)
```

```
Rows: 344
Columns: 8
$ species           <fct> Adelie, Adelie, Adelie, Adelie, Adelie, Adelie, Adel~
$ island            <fct> Torgersen, Torgersen, Torgersen, Torgersen, Torgerse~
$ bill_length_mm    <dbl> 39.1, 39.5, 40.3, NA, 36.7, 39.3, 38.9, 39.2, 34.1, ~
$ bill_depth_mm     <dbl> 18.7, 17.4, 18.0, NA, 19.3, 20.6, 17.8, 19.6, 18.1, ~
$ flipper_length_mm <int> 181, 186, 195, NA, 193, 190, 181, 195, 193, 190, 186~
$ body_mass_g       <int> 3750, 3800, 3250, NA, 3450, 3650, 3625, 4675, 3475, ~
$ sex               <fct> male, female, female, NA, female, male, female, male~
$ year              <int> 2007, 2007, 2007, 2007, 2007, 2007, 2007, 2007, 2007~
```

Species

Figure 1 is a scatter plot of species of penguins.

```
ggplot(
  penguins,
  aes(
    x = bill_length_mm, y = bill_depth_mm,
    color = species, shape = species
  )
) +
  geom_point() +
  theme_minimal() +
  scale_color_colorblind() +
  labs(x = "Bill length (mm)", y = "Bill depth (mm)")
```

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

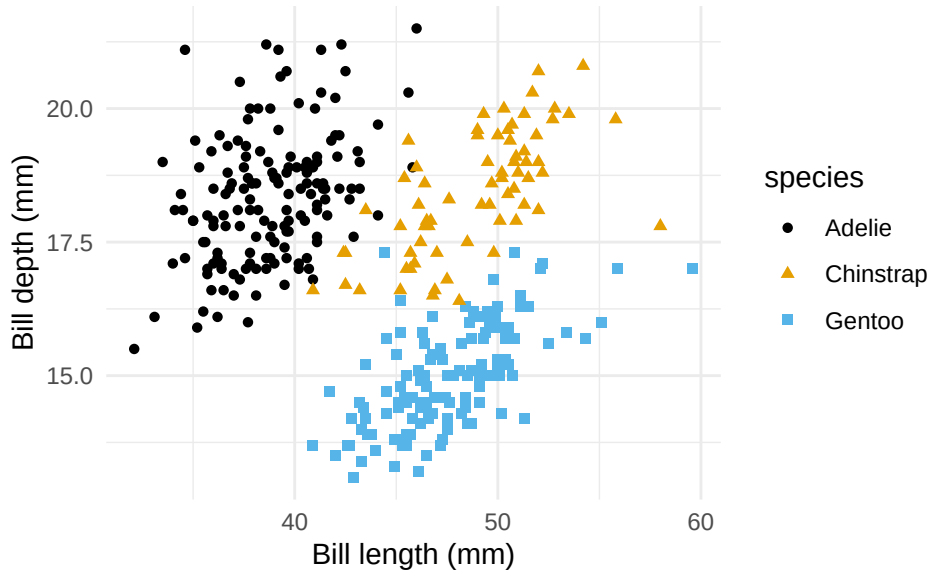

Figure 1: A scatterplot of penguins' bill depth and length, colored by species of penguins.

Penguins

Table 1 shows the first 10 penguins from the dataset.

```
penguins |>
  slice_head(n = 10) |>
  select(species, island, bill_length_mm, bill_depth_mm) |>
```

```
gt()
```

Table 1: First 10 penguins.

species	island	bill_length_mm	bill_depth_mm
Adelie	Torgersen	39.1	18.7
Adelie	Torgersen	39.5	17.4
Adelie	Torgersen	40.3	18.0
Adelie	Torgersen	NA	NA
Adelie	Torgersen	36.7	19.3
Adelie	Torgersen	39.3	20.6
Adelie	Torgersen	38.9	17.8
Adelie	Torgersen	39.2	19.6
Adelie	Torgersen	34.1	18.1
Adelie	Torgersen	42.0	20.2

Analysis

Modeling results

References

Gorman, Kristen B., Tony D. Williams, and William R. Fraser. 2014. "Ecological Sexual Dimorphism and Environmental Variability Within a Community of Antarctic Penguins (Genus Pygoscelis)." Edited by André Chiaradia. *PLoS ONE* 9 (3): e90081. https://doi.org/10.1371/journal.pone.0090081.