

Penguins

```
library(tidyverse)
library(tidyuesdayR)
library(scales)
library(dbplyr)
library(ggplot2)
theme_set(theme_light())
```

```
penguins <- readr::read_csv('https://raw.githubusercontent.com/rfordatascience/tidyuesday/master/data/penguins/penguins.csv')

penguins <-
  penguins %>%
  filter(!is.na(bill_length_mm))
```

Does gender affect physical features?

```
penguins %>%
  filter(!is.na(sex)) %>%
  group_by(sex) %>%
  summarise(bill_length_mm = mean(bill_length_mm),
            bill_depth_mm = mean(bill_depth_mm),
            flipper_length_mm = mean(flipper_length_mm),
            body_mass_g = mean(body_mass_g))
```

```
## # A tibble: 2 x 5
##   sex      bill_length_mm bill_depth_mm flipper_length_mm body_mass_g
##   <chr>          <dbl>         <dbl>          <dbl>         <dbl>
## 1 female          42.1           16.4           197.         3862.
## 2 male           45.9           17.9           205.         4546.
```

There isn't much difference in their physical features except when it comes to body mass, male are heavier

Does species affect physical features?

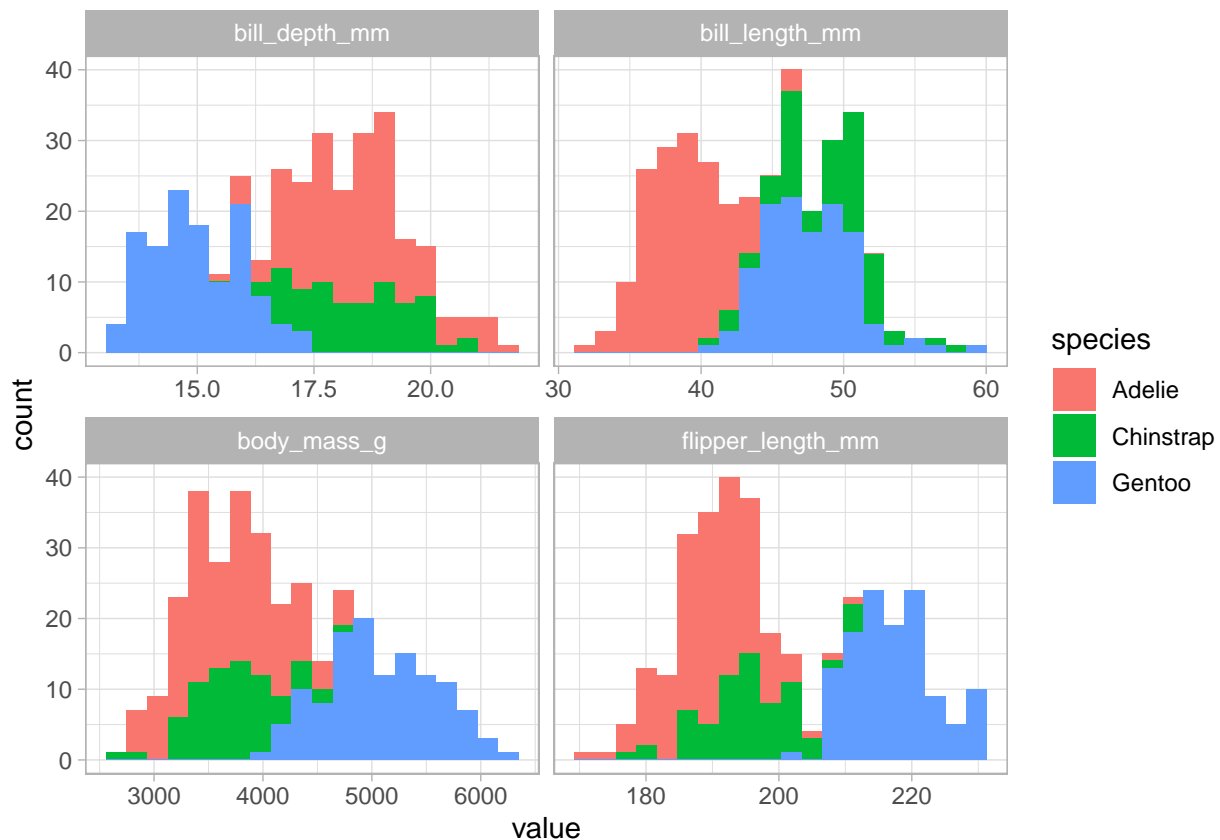
```
penguins %>%
  group_by(species) %>%
  summarise(bill_length_mm = mean(bill_length_mm),
            bill_depth_mm = mean(bill_depth_mm),
            flipper_length_mm = mean(flipper_length_mm),
            body_mass_g = mean(body_mass_g))
```

```
## # A tibble: 3 x 5
##   species    bill_length_mm bill_depth_mm flipper_length_mm body_mass_g
##   <chr>          <dbl>         <dbl>         <dbl>         <dbl>
## 1 Adelie         38.8           18.3           190.         3701.
## 2 Chinstrap      48.8           18.4           196.         3733.
## 3 Gentoo        47.5           15.0           217.         5076.
```

Gentos seem much heavier

How to separate species from one another?

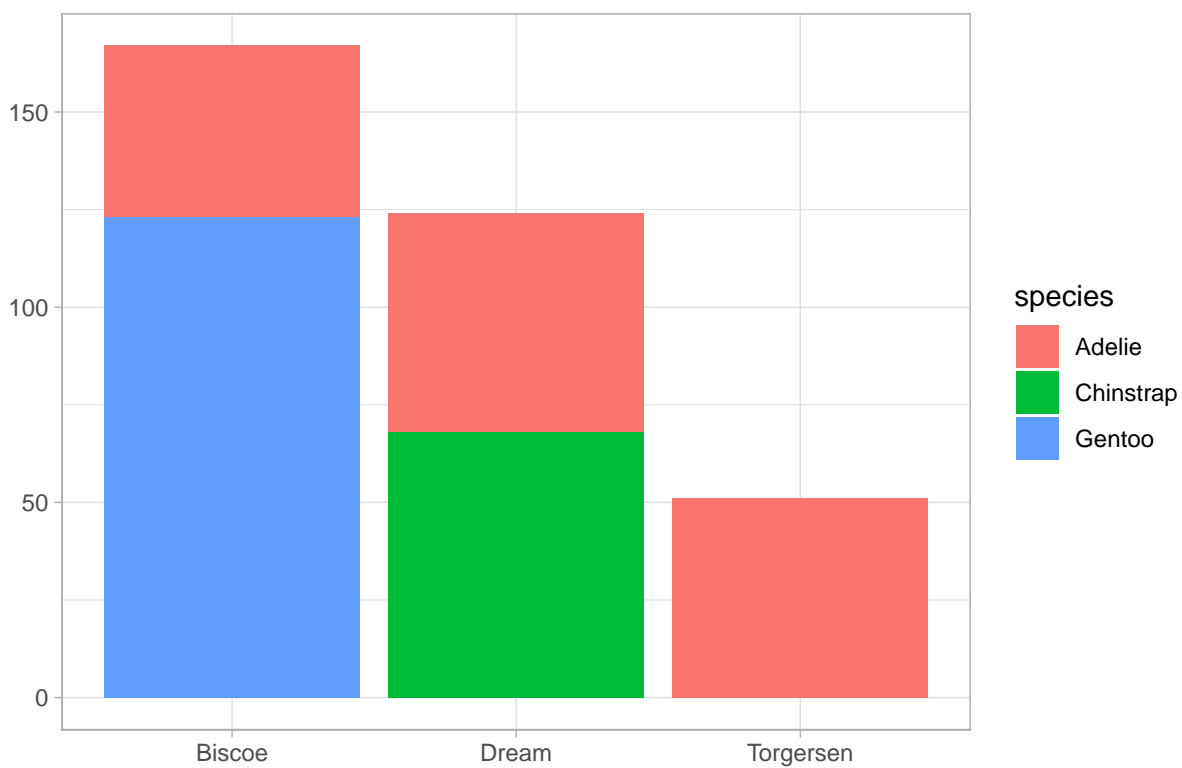
```
# Try other way to draw the facet
penguins %>%
  pivot_longer(
    cols = bill_length_mm: body_mass_g,
    names_to = "metric",
    values_to = "value"
  ) %>%
  ggplot(aes(value , fill =species)) +
  geom_histogram(bins = 20) +
  facet_wrap(~metric, scale='free_x')
```



You can separate Adelie by short bill length, And Gentoos by small bill depth, large body mass and long flipper length

Does certain islands have certain species?

```
penguins %>%  
  count(island, species) %>%  
  ggplot(aes(x=island, y=n, fill = species, group=species)) +  
  geom_col() +  
  labs(title=str_to_title(""),  
        x = "",  
        y = "")
```



Yes, but they all have adelines in common