

Ch8: Annotations

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Setup

```
# Libraries
library(pacman)
p_load(tidyverse, scales, patchwork, ggfittext, gghighlight, janitor,
       ggforce)

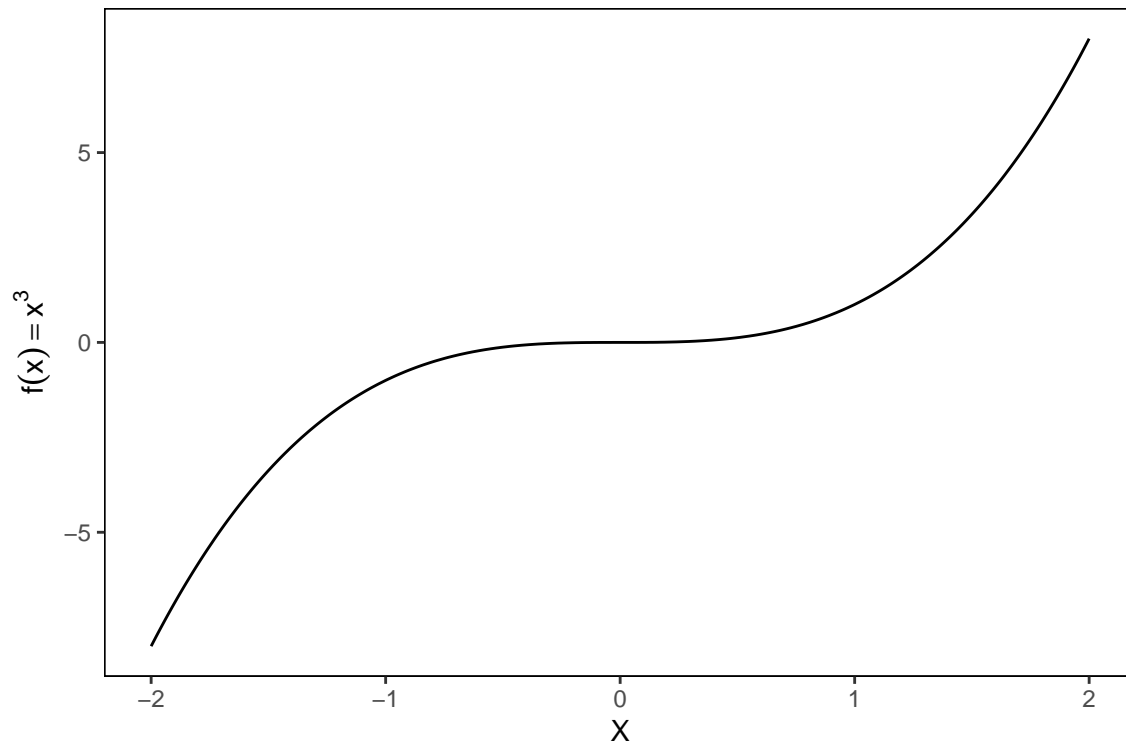
# Source plot theme
source("../plot_theme.R")
```

Sandbox

This chapter doesn't include any exercise. Instead, I'll experiment with the example code from the book with other data sets and comment on any notable findings.

```
# Supplying mathematical expression to quote() function in axis label
# Importantly-- the expression doesn't need to be in quotes
values <- seq(-2, 2, by = 0.01)
df <- data.frame(
  x = values,
  y = values ^ 3
)

ggplot(df, aes(x, y)) +
  geom_line() +
  labs(
    x = "X",
    y = quote(f(x) == x^3)
  ) +
  plot_theme
```

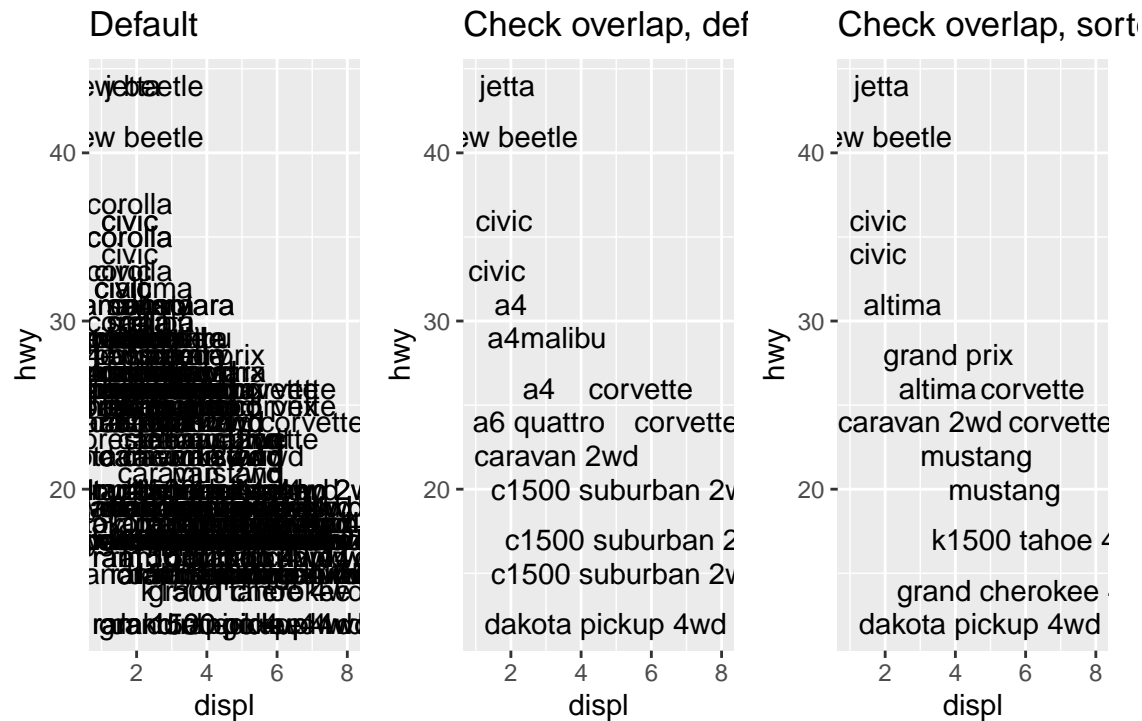


```
# Check overlap of labels when plotting-- use two different sorting orders
# The algorithm is fairly simple and if two labels have overlapping positions, the first one that appears
p1 <- ggplot(mpg, aes(displ, hwy)) +
  geom_text(aes(label = model)) +
  labs(title = "Default") +
  xlim(1, 8)

p2 <- ggplot(mpg, aes(displ, hwy)) +
  geom_text(aes(label = model), check_overlap = TRUE) +
  labs(title = "Check overlap, default") +
  xlim(1, 8)

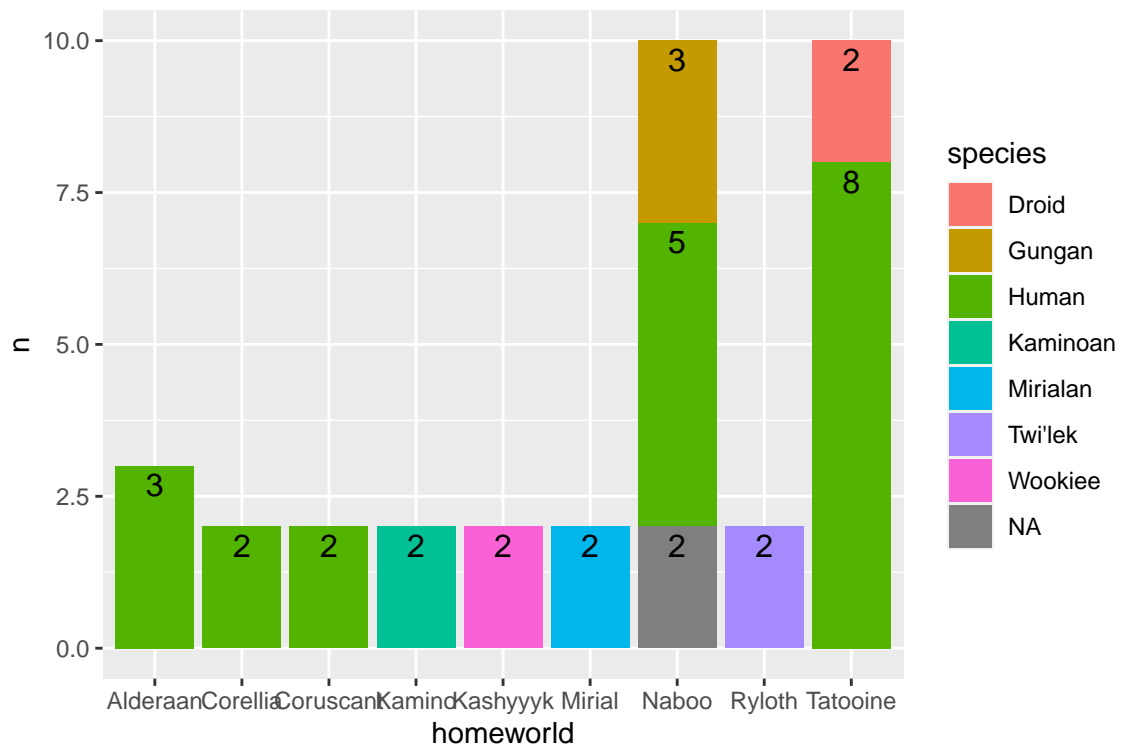
p3 <- arrange(mpg, desc(displ)) %>%
  ggplot(aes(displ, hwy)) +
  geom_text(aes(label = model), check_overlap = TRUE) +
  labs(title = "Check overlap, sorted") +
  xlim(1, 8)

wrap_plots(p1, p2, p3, nrow = 1)
```

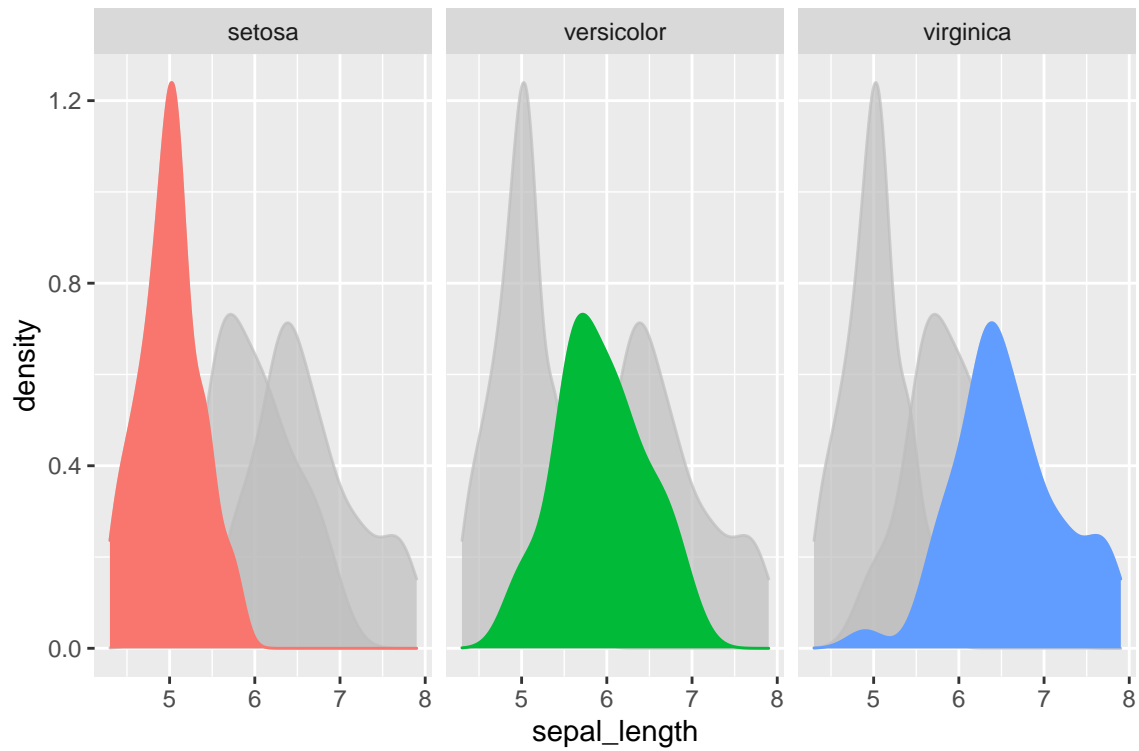


```
# Use the ggfittext package to modify text labels
starwars_input <- starwars %>%
  count(homeworld, species) %>%
  filter(n > 1 & !is.na(homeworld))

ggplot(starwars_input, aes(homeworld, n, fill = species, label = n)) +
  geom_col(position = "stack") +
  geom_bar_text(position = "stack")
```



```
# Highlighting example-- instead of using larger points in a different color behind existing points with
# This has the benefit of displaying all of the data while focusing on distinct subsets
# Use the iris dataset
clean_names(iris) %>%
  ggplot(aes(sepal_length, fill = species, color = species)) +
  geom_density() +
  gghighlight() +
  facet_wrap(~species) +
  theme(legend.position = "none")
```



```
# Using the ggforce package
# Fill the ellipse
ggplot(mpg, aes(displ, hwy)) +
  geom_point() +
  ggforce::geom_mark_ellipse(aes(fill = as.factor(cyl), group = cyl))
```

