GGplot Vignette

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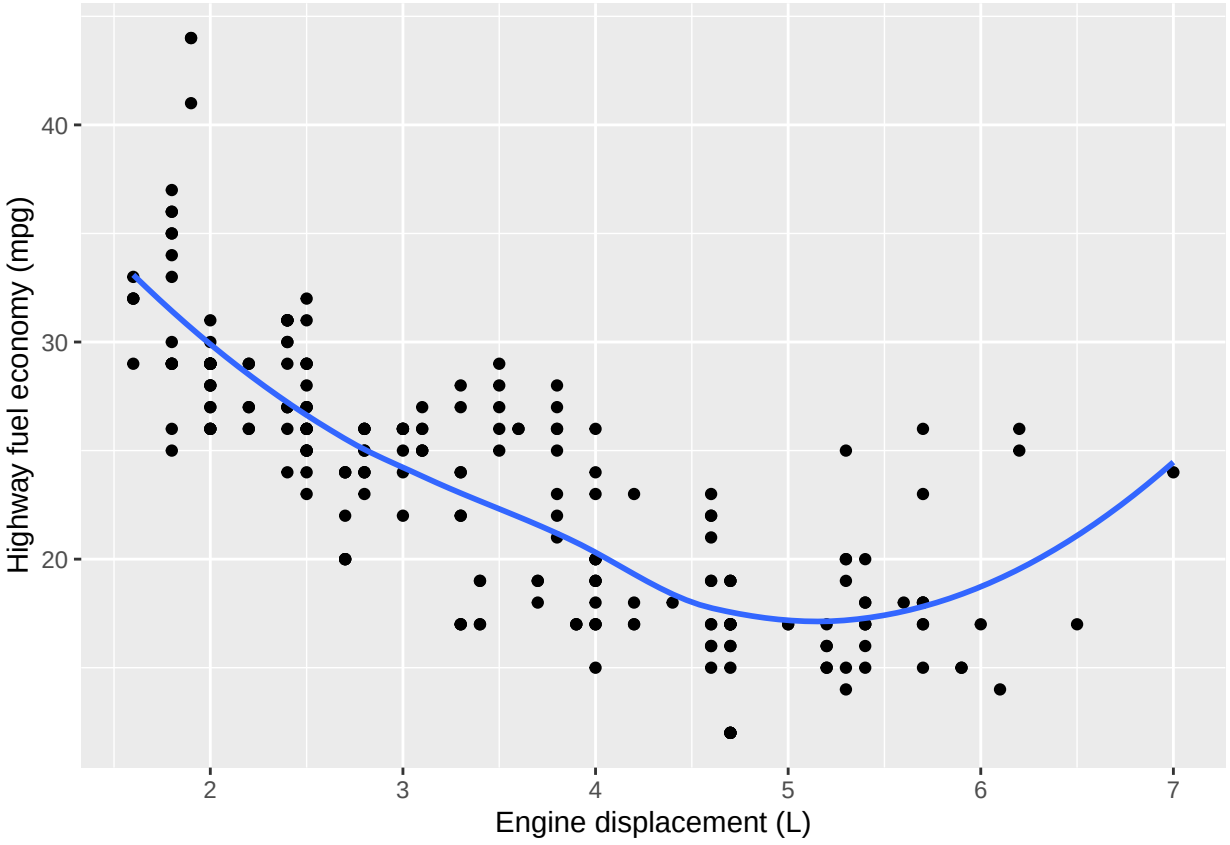
Scatter Plot of Engine Displacement vs MPG with LOESS Line Imposed

```
library(ggplot2)
ggplot(mpg, aes(displ, hwy)) +
  geom_point(aes()) +
  geom_smooth(se = FALSE) +
  labs(
    x = "Engine displacement (L)",
    y = "Highway fuel economy (mpg)"
  )
```

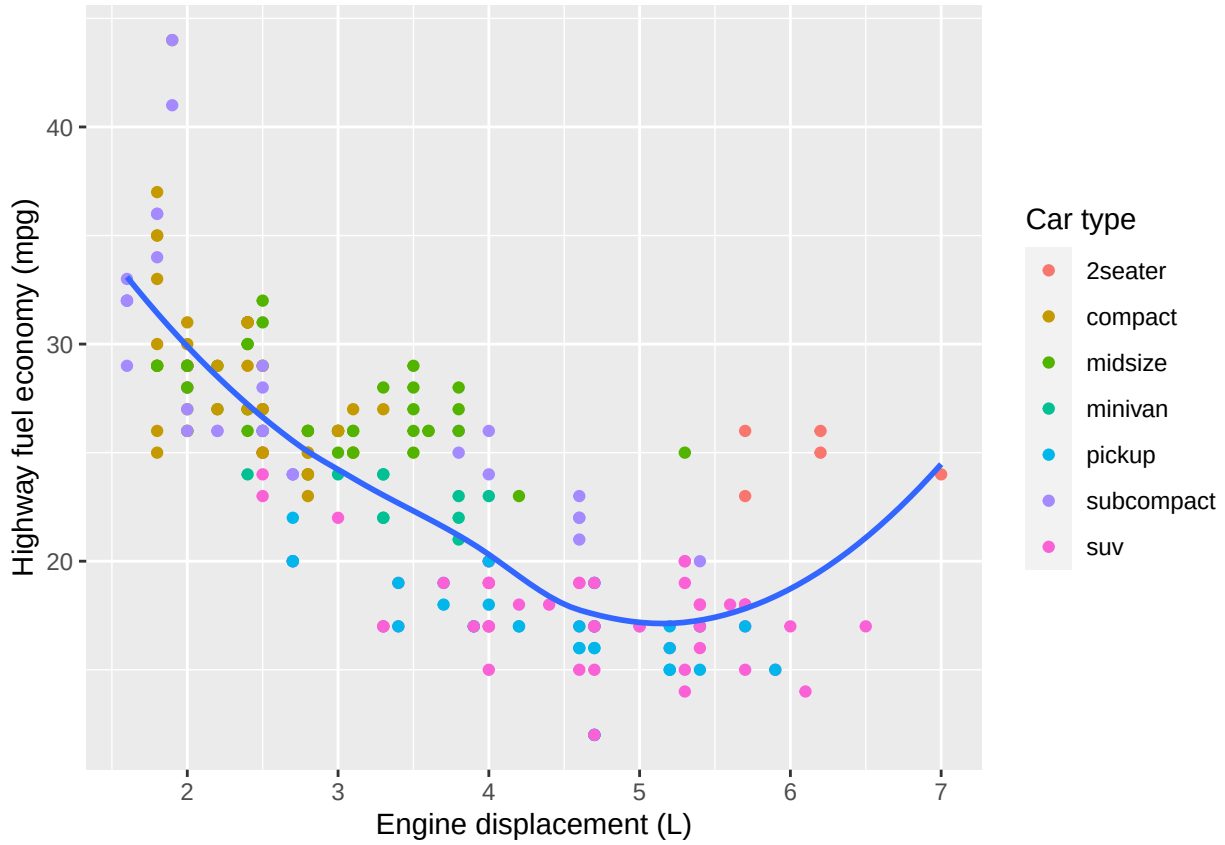
```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



Add Color by Car Type

```
ggplot(mpg, aes(displ, hwy)) +
  geom_point(aes(colour = class)) +
  geom_smooth(se = FALSE) +
  labs(
    x = "Engine displacement (L)",
    y = "Highway fuel economy (mpg)",
    colour = "Car type"
  )
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



Add Best in Class Annotation

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

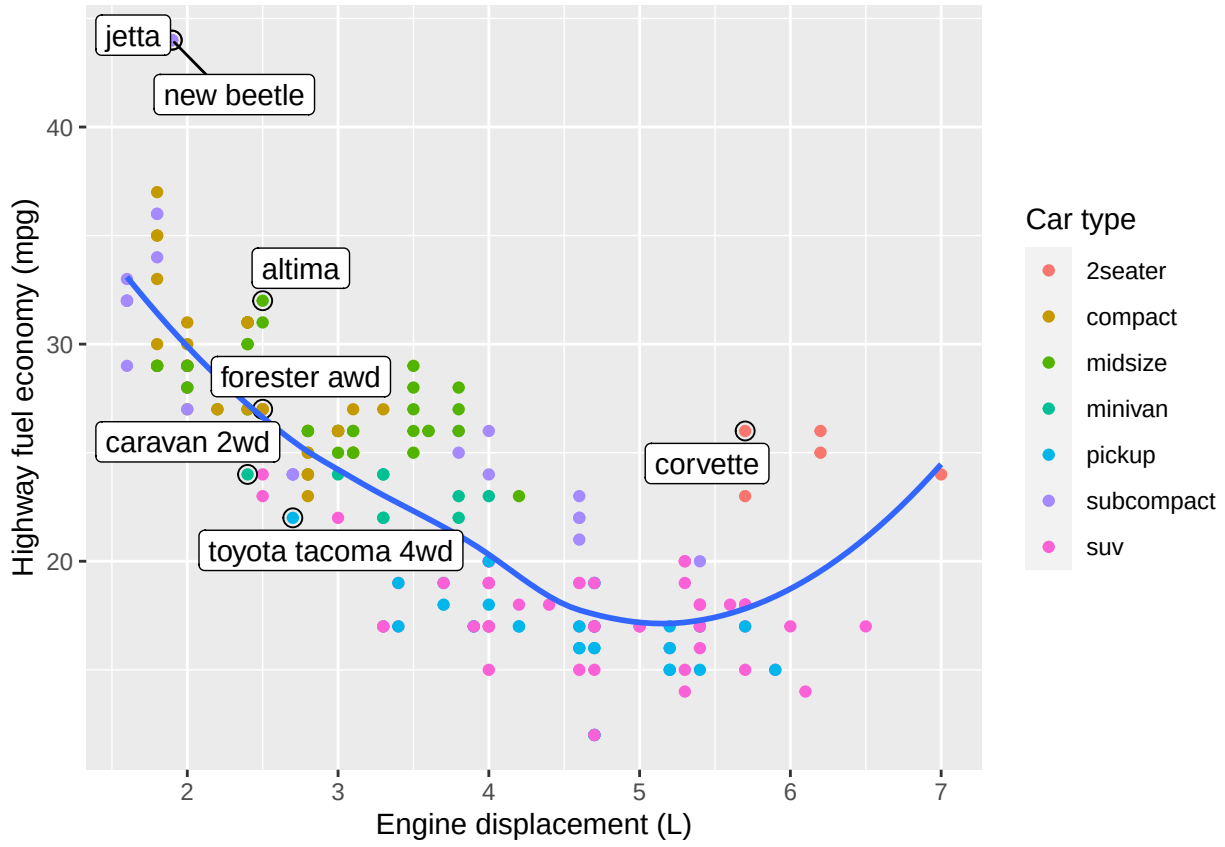
```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
best_in_class <- mpg %>%
  group_by(class) %>%
  filter(row_number(desc(hwy)) == 1)

ggplot(mpg, aes(displ, hwy)) +
  geom_point(aes(colour = class)) +
  geom_point(size = 3, shape = 1, data = best_in_class) +
  geom_smooth(se = FALSE) +
  ggrepel::geom_label_repel(aes(label = model), data = best_in_class) +
    labs(
    x = "Engine displacement (L)",
    y = "Highway fuel economy (mpg)",
    colour = "Car type")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



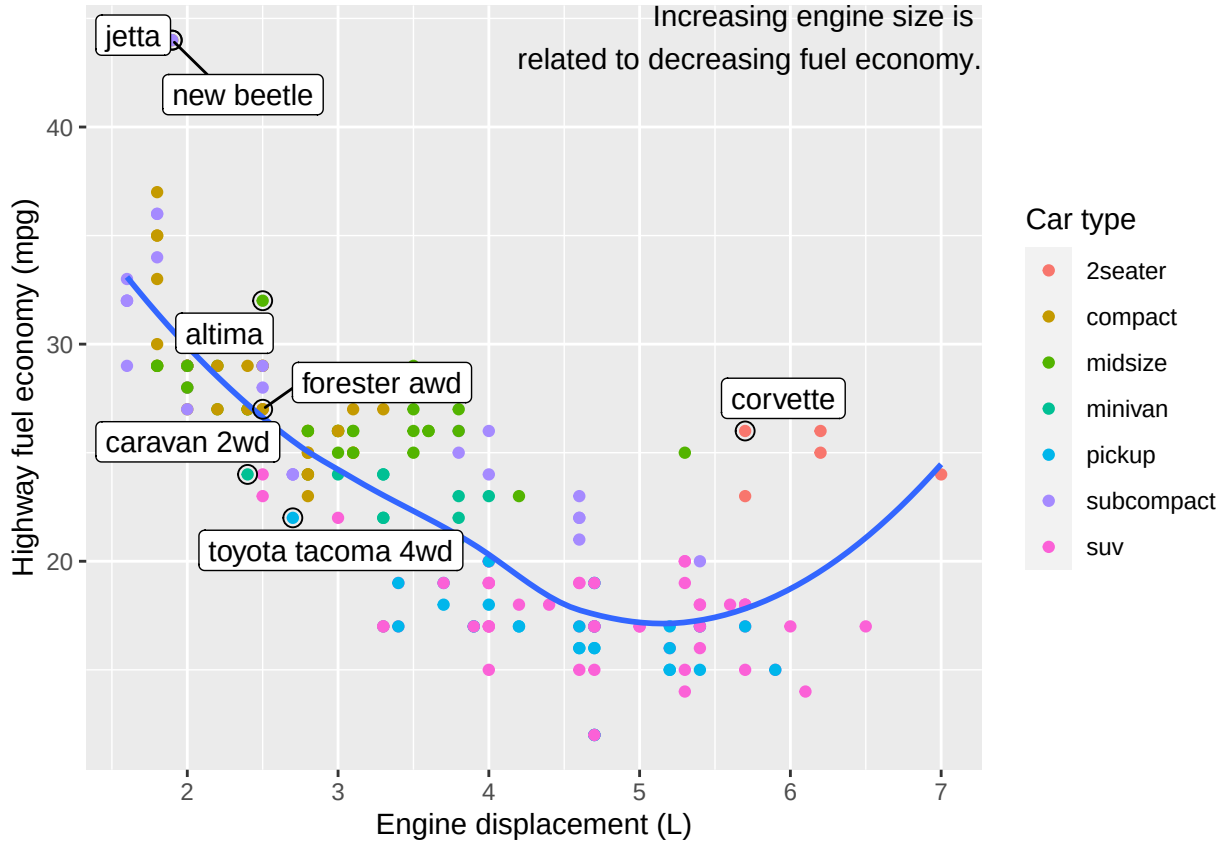
Add annotation to Corner of Plot

```
label <- tibble(
  displ = Inf,
  hwy = Inf,
  label = "Increasing engine size is \nrelated to decreasing fuel economy."
)
library(dplyr)
best_in_class <- mpg %>%
```

```
  group_by(class) %>%
  filter(row_number(desc(hwy)) == 1)

ggplot(mpg, aes(displ, hwy)) +
  geom_point(aes(colour = class)) +
  geom_smooth(se = FALSE) +
  geom_point(size = 3, shape = 1, data = best_in_class) +
  ggrepel::geom_label_repel(aes(label = model), data = best_in_class) +
  geom_text(aes(label = label), data = label, vjust = "top", hjust = "right") +
    labs(
    x = "Engine displacement (L)",
    y = "Highway fuel economy (mpg)",
    colour = "Car type")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



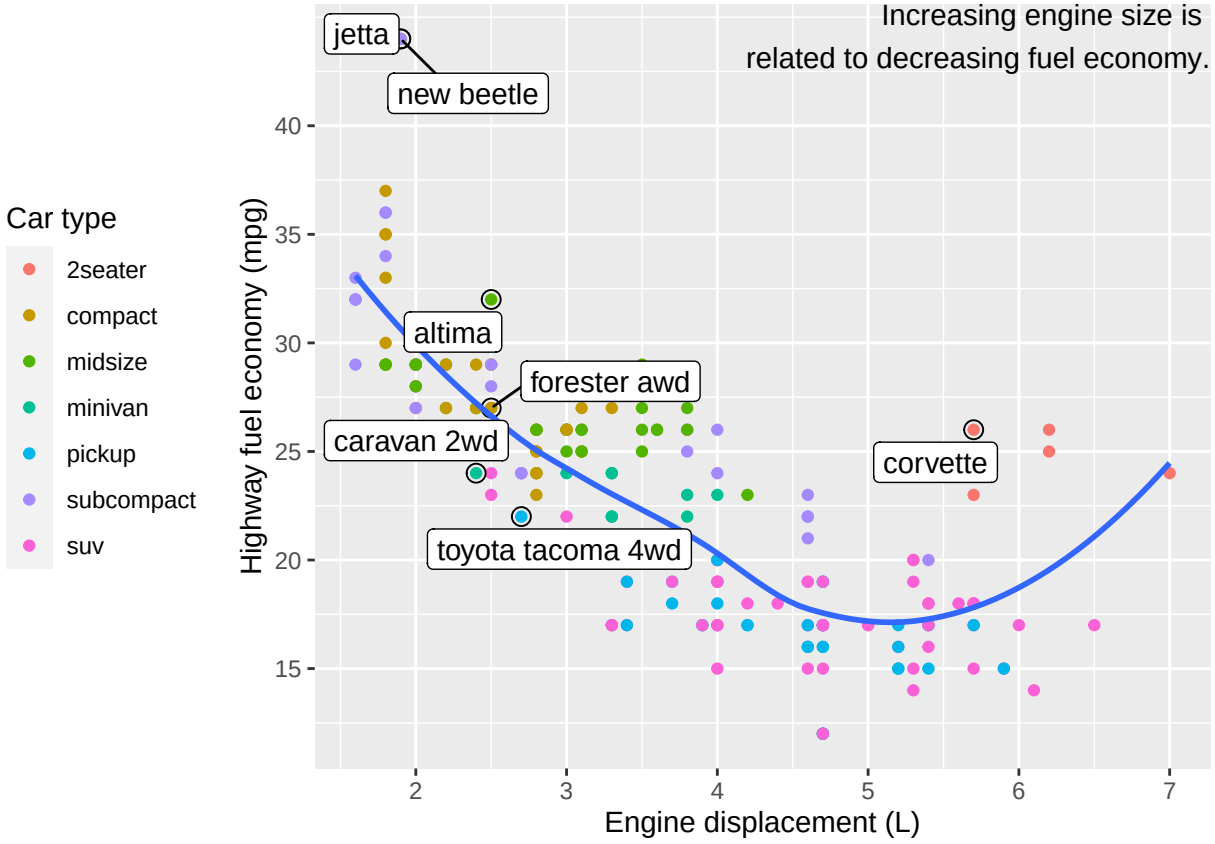
Manipulate Ticks and Legend Position

```
label <- tibble(
  displ = Inf,
  hwy = Inf,
  label = "Increasing engine size is \nrelated to decreasing fuel economy."
)
library(dplyr)
best_in_class <- mpg %>%
```

```
  group_by(class) %>%
  filter(row_number(desc(hwy)) == 1)

ggplot(mpg, aes(displ, hwy)) +
  geom_point(aes(colour = class)) +
  geom_point(size = 3, shape = 1, data = best_in_class) +
  geom_smooth(se = FALSE) +
  ggrepel::geom_label_repel(aes(label = model), data = best_in_class) +
  geom_text(aes(label = label), data = label, vjust = "top", hjust = "right") +
  scale_y_continuous(breaks = seq(15, 40, by = 5)) +
  theme(legend.position = "left") +
    labs(
    x = "Engine displacement (L)",
    y = "Highway fuel economy (mpg)",
    colour = "Car type")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```



Saving Plot

```
ggsave("my-plot.pdf")
```

```
## Saving 6.5 x 4.5 in image
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```