

car_viz-2-.R

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```
library(tidyverse)

## -- Attaching packages ----- tidyverse 1.3.1 --
## v ggplot2 3.3.5      v purrr   0.3.4
## v tibble  3.1.4      v dplyr   1.0.7
## v tidyr   1.1.3      v stringr 1.4.0
## v readr   2.0.1      v forcats 0.5.1

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()

# call built-in data mtcars.
data(mtcars)

# Select only car models where mpg<20
mtcars_mpg2 <- mtcars[mtcars$mpg < 20,]

# Reduce the variables to mpg, cyl, disp, hp, gears
mtcars_mpg2 <- mtcars_mpg2[, c(1,2,3,4,10)]

# read the R file hand_functions.R so that it can be used
# notice that with echo = TRUE
source(file = "/Users/jinnianshen/Desktop/hand_functions(2).R", echo = TRUE)

##
## > sum_special <- function(df_x) {
## +   try(if (!is.data.frame(df_x))
## +       stop("Input data must be a data frame."))
## +   sp_means <- apply(df_ .... [TRUNCATED]

# Now use the function from hand_functions.R

sp_out <- sum_special(mtcars_mpg2)

# library(esquisse)
#
# esquisser(data = mtcars_mpg2, viewer = "browser")

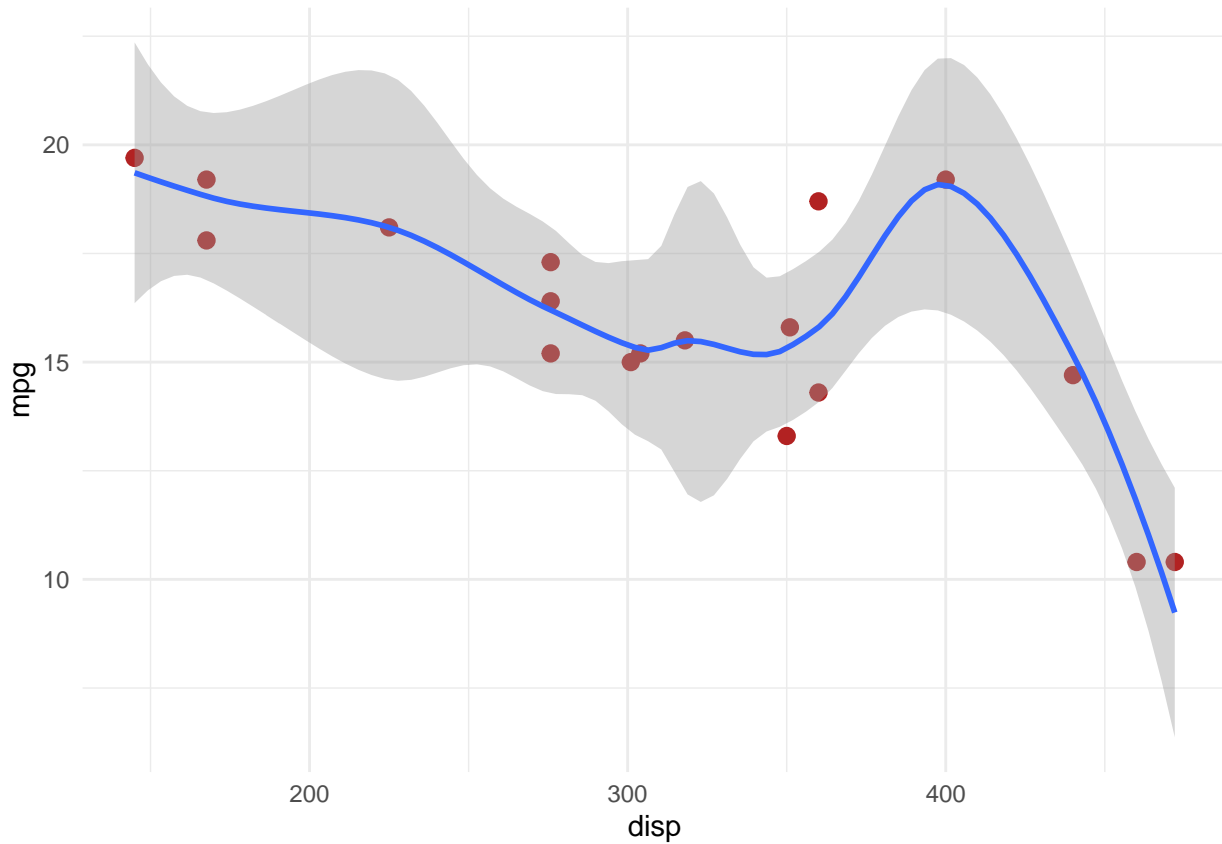
ggplot(mtcars_mpg2) +
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aes(x = disp, y = mpg) +
geom_point(shape = "bullet", size = 4L, colour = "#B22222") +
geom_smooth(span = 0.5) +
theme_minimal()

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## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
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# Here, the value of the variable disp is mapped to the X-axis,
# and the value of the variable mpg is mapped to the Y-axis.
# geom_point() creates a scatterplot.
# geom_smooth() adds a smooth curve.

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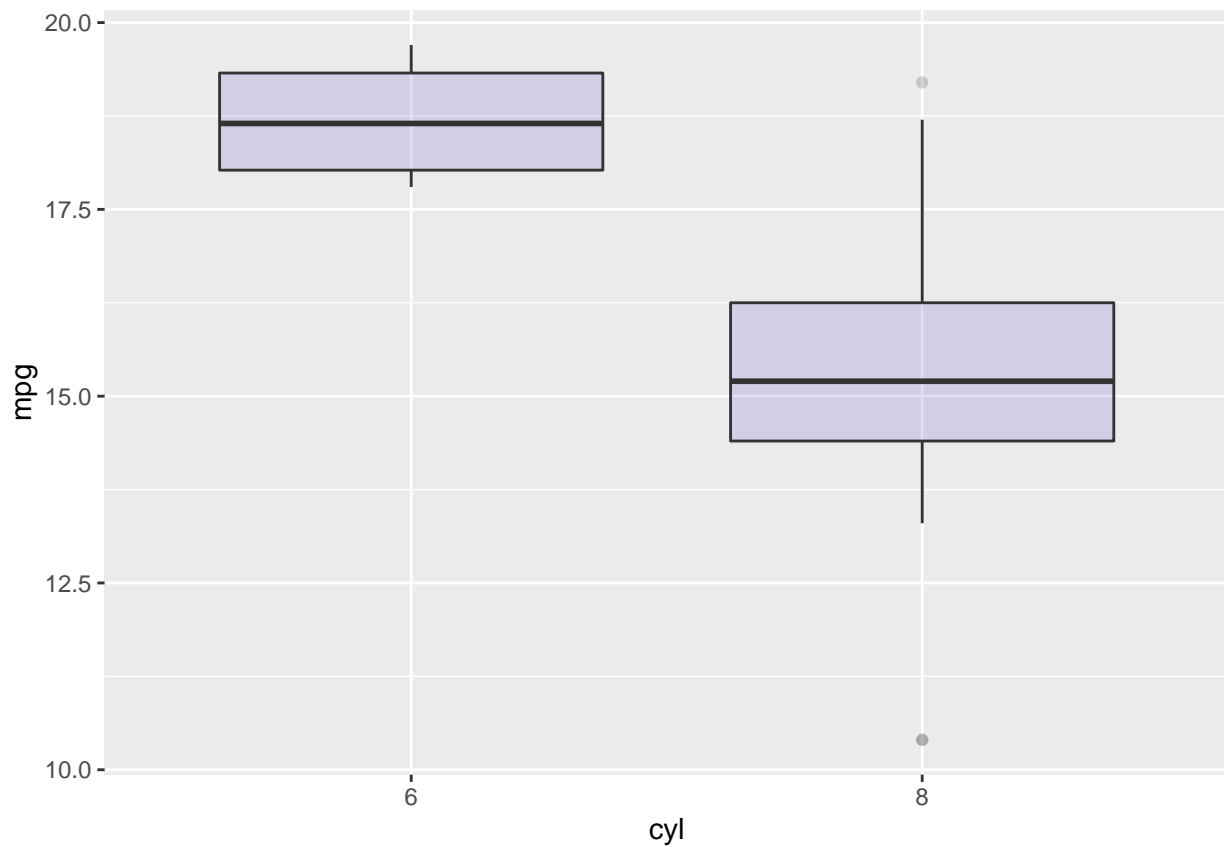
# note that this boxplot cannot be made with esquisse() unless
# the data is adjusted. What adjustment is needed?

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ggplot(mtcars_mpg2, aes(x=as.factor(cyl), y=mpg)) +
  geom_boxplot(fill="slateblue", alpha=0.2) +
  xlab("cyl")

```



```
# The ggplot2 package helped us implement a comprehensive graph-creating system.  
# In ggplot2, the graph is concatenated by a (+) function.  
# The aes() function is used to specify the role that each variable plays.  
# Note, however, that if you want the dot color to be fixed,  
# you need to place the property argument outside of aes().
```