Data Visualization with R and ggplot2

(ggplot2 foundations)

Assignment

Create *R* script called *assignment_1.R*. Modify the R code (we have written in this section) to create figures in the exercises below. Each figure is just a modification of created scatterplot in the section exercises!

Exercise 1

Create a plot you can see on figure 1, export a figure to a file called ***01_assignment_fig1.png***. Some useful tips:

- data and aesthetics mapping are the same;

- inside **geom_point()** specify parameter **size** = 8;

- inside **geom_point()** specify parameter **alpha** = 1/5;

- change default points color by adding parameter **color** = "red", inside **geom_point()**;

- drop commands: **geom_smooth()**, **facet_grid()**, **cord_cartesian()**, **scale_x_continuous()**, **scale_y_continuous()**;

- keep axis labelling and plot title as is;

- inside **theme()** only keep arguments for modifying title and labels text;

Exercise 2

Create a plot you can see on figure 2, export a figure to a file called ***01_assignment_fig2.png***. Some useful tips:

- plot is very similar to figure from exercise 1;

- additional variable "transmission" (we created in the code) is added to aesthetics mapping;

- in aesthetics mapping add parameter **color** = transmission;
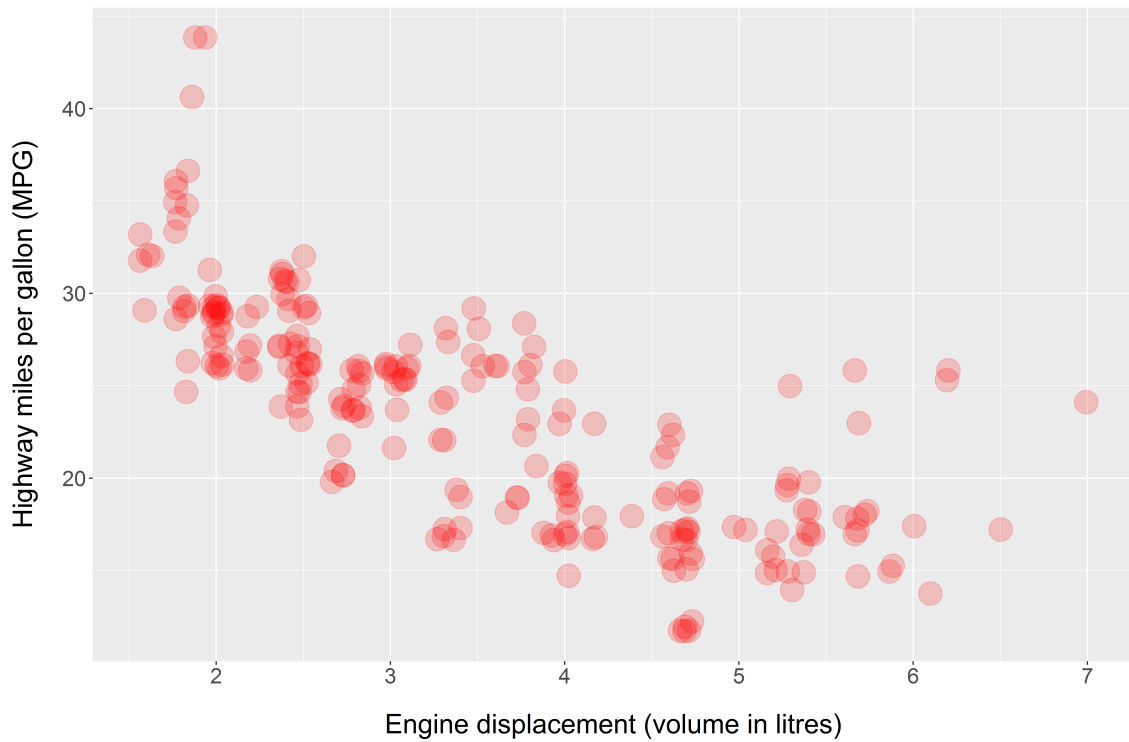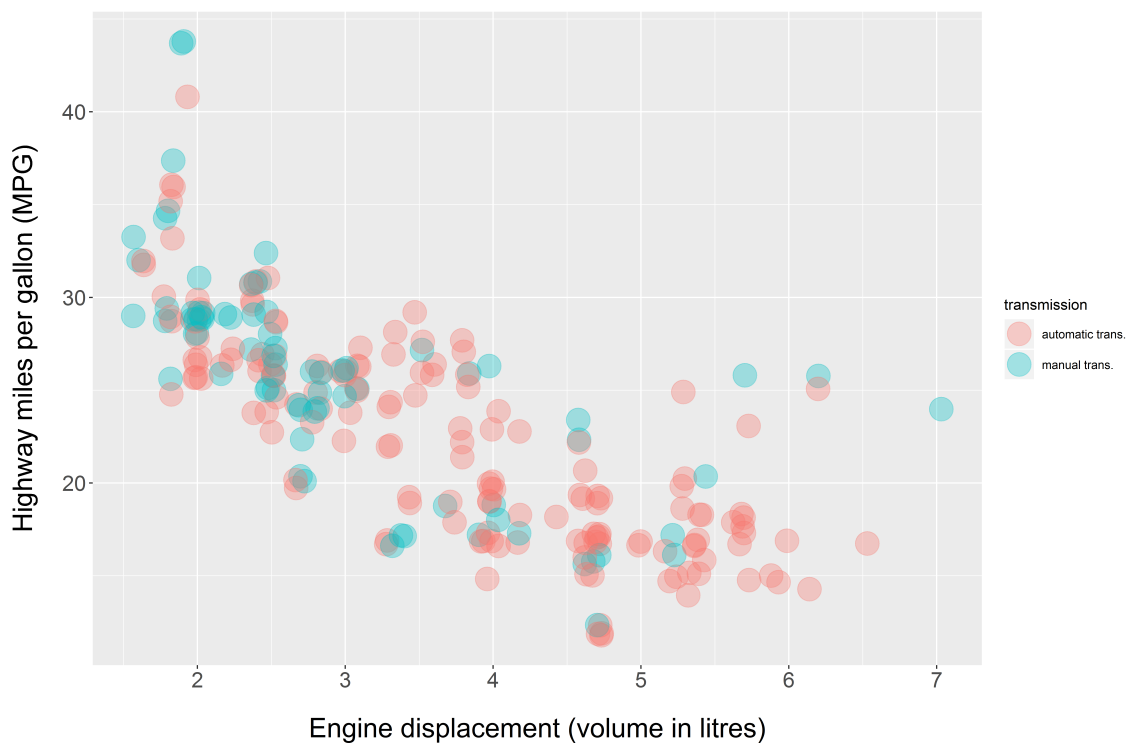
Figure 1: Exercise 1 figure

Car fuel consumption

Car fuel consumption

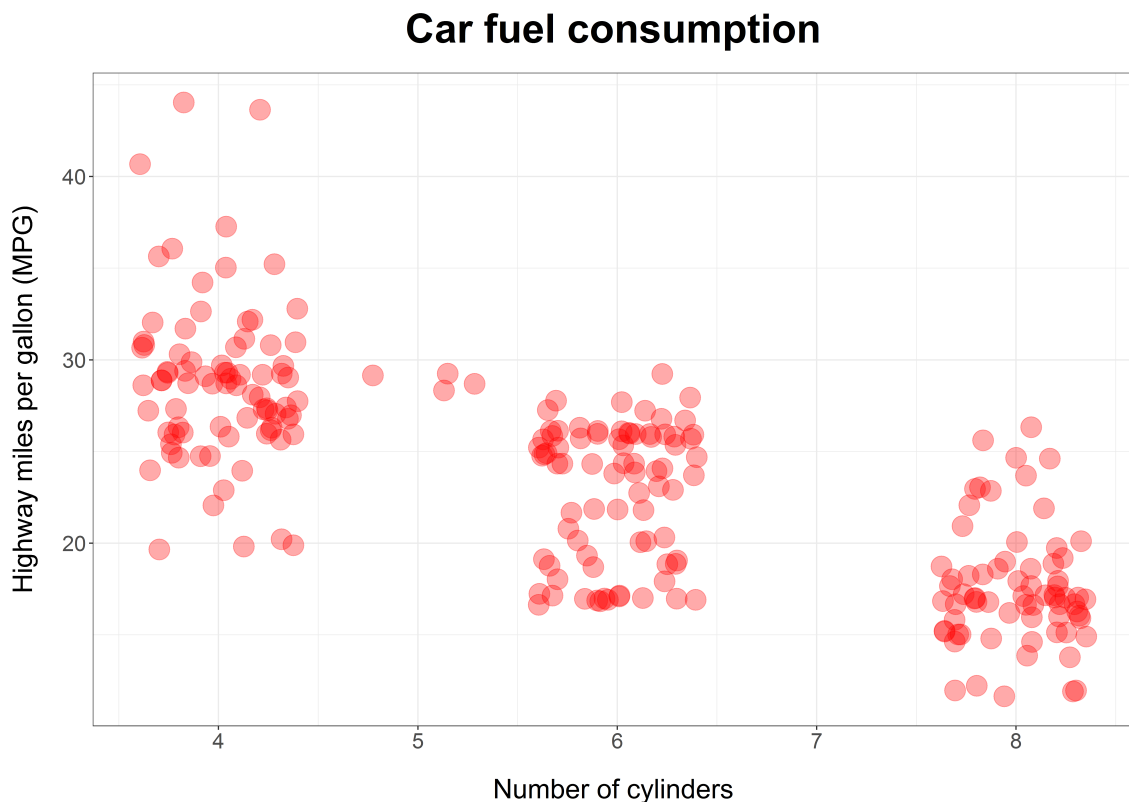Figure 2: Exercise 2 figure

Exercise 3

Create a plot you can see on figure 3, export a figure to a file called ***01_assignment_fig3.png***.
Some useful tips:

- use code for creating figure 1;

- change aesthetics mapping, by replacing aesthetics for x axis variable: **x** = cyl (now we use variable for number of cylinders);

- inside **geom_point()** specify parameter to **size** = 7;

- inside **geom_point()** specify parameter to **alpha** = 1/3;

- modify x axis label;

- before **theme()** command add **theme_bw()** (black and white theme);

Figure 3: Exercise 3 figure

Exercise 4

Create a plot you can see on figure 4, export a figure to a file called ***01_assignment_fig4.png***. Some useful tips:

- use code for creating figure 1;

- change aesthetics mapping, by replacing aesthetics for x axis variable: **x** = class (now we use variable for car type);

- inside **geom_point()** specify parameter to **position** = "nudge";

- modify x axis label;

- before **theme()** command add **theme_minimal()**;

Car fuel consumption