

Create data visualizations in R

Explore aesthetics in analysis

Annotate and save visualizations

Weekly challenge 4

Reading: Glossary: Terms and definitions

Quiz: Weekly challenge 4

10 questions

🎉 Congratulations! You passed!

Grade received: 90%

Latest Submission

Review Learning Objectives

1. Which of the following are operations you can perform in ggplot2? Select all that apply.

1 / 1 point

- ☒ Add a title to the plot
- ☒ Change the colors and dimensions of your plot
- ☐ Automatically clean data before creating a plot
- ☒ Create faceted subplots
- ☐ Create a legend
- ☐ Correct

Your grade

90%

View Feedback

We keep your highest score

2. When creating a plot in ggplot you must set the mapping argument of a function. Which function has the mapping argument?

0 / 1 point

- ☐ The geometric function
- ☐ The annotate function
- ☒ The ggplot function
- ☐ The aesthetic function
- ☒ Incorrect

Review the video on creating a plot (17)

3. A data analyst creates a plot using the following code chunk:

1 / 1 point

```
ggplot(data = penguins) +  
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g))  
Which of the following represents a variable in the code chunk? Select all that apply.
```

☒ body_mass_g

☐ Correct

☐ y

☐ x

☒ flipper_length_mm

☐ Correct

4. In ggplot2, which of the following aesthetic attributes can you use to map variables to points? Select all that apply.

1 / 1 point

- ☒ Color
- ☐ Correct
- ☐ Facet
- ☒ Shape
- ☐ Correct
- ☒ Size
- ☐ Correct

5. A data analyst is working with the following plot and gets an error caused by a bug. What is the cause of the bug?

1 / 1 point

```
ggplot(data = penguins) <->  
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g))  
A missing closing parenthesis needs to be added.  
The pipe should be at the beginning of the second line.  
A function name needs to be capitalized.  
The code uses a pipe instead of a plus sign.
```

☒ Correct

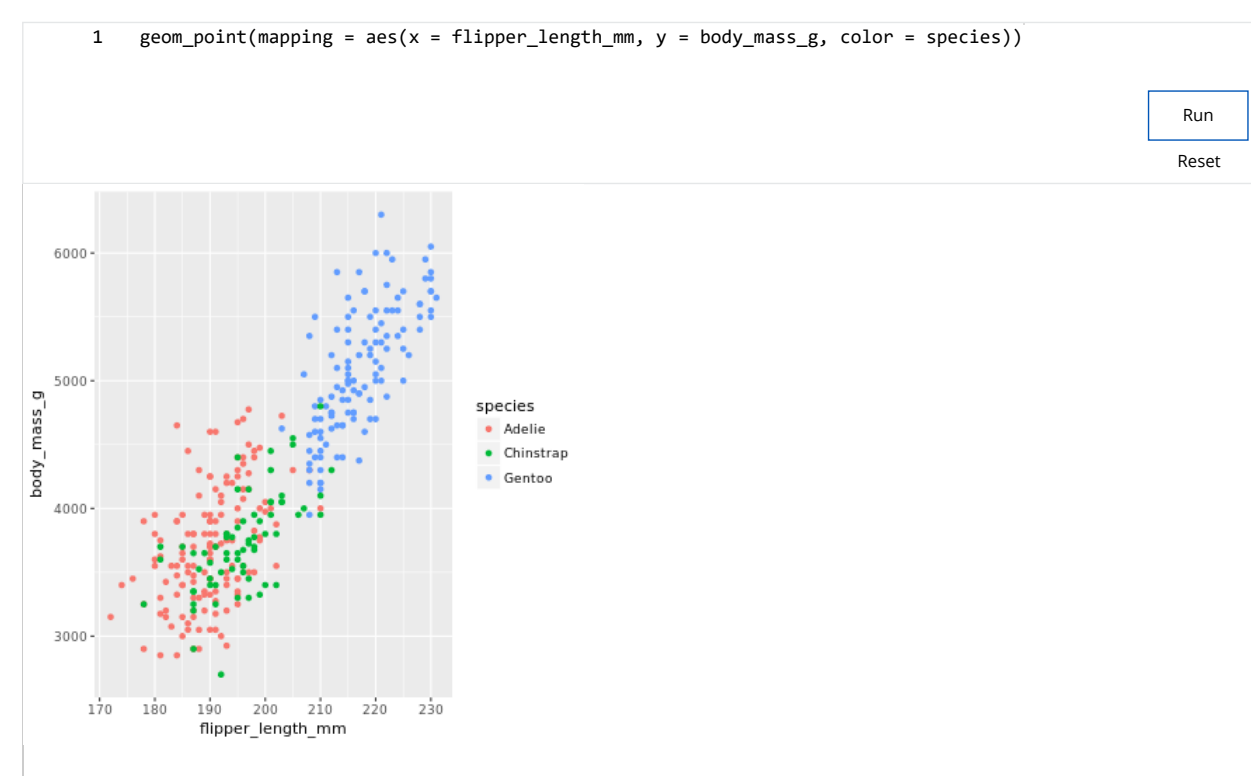
6. You are working with the penguins dataset. You create a scatterplot with the following code:

1 / 1 point

```
ggplot(data = penguins) +  
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g))
```

You want to highlight each penguin species in your plot. Add a code chunk to the second line of code to map the aesthetic color to the variable species.

NOTE: the three dots (...) indicate where to add the code chunk. You may need to scroll in order to find the dots.



Which penguin species does your visualization display?

- ☐ Adelia, Chinstrap, Macaroni
- ☐ Chinstrap, Emperor, Gentoo
- ☐ Adelia, Emperor, Gentoo
- ☒ Adelia, Chinstrap, Gentoo

☒ Correct

You add the code chunk `color = species` to the second line of code to map the aesthetic color to the variable species. The correct code is `ggplot(data = penguins) + geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g, color = species))`. Inside the parentheses of the `aes()` function, after the comma that follows `y = body_mass_g`, write the aesthetic color, then an equals sign, then the variable (species). The data points for each penguin species now appear in different colors.

Your visualization displays the Adelia, Chinstrap, and Gentoo penguin species.

7. What function creates a scatterplot and then adds a small amount of random noise to each point in the plot to make the points easier to find?

1 / 1 point

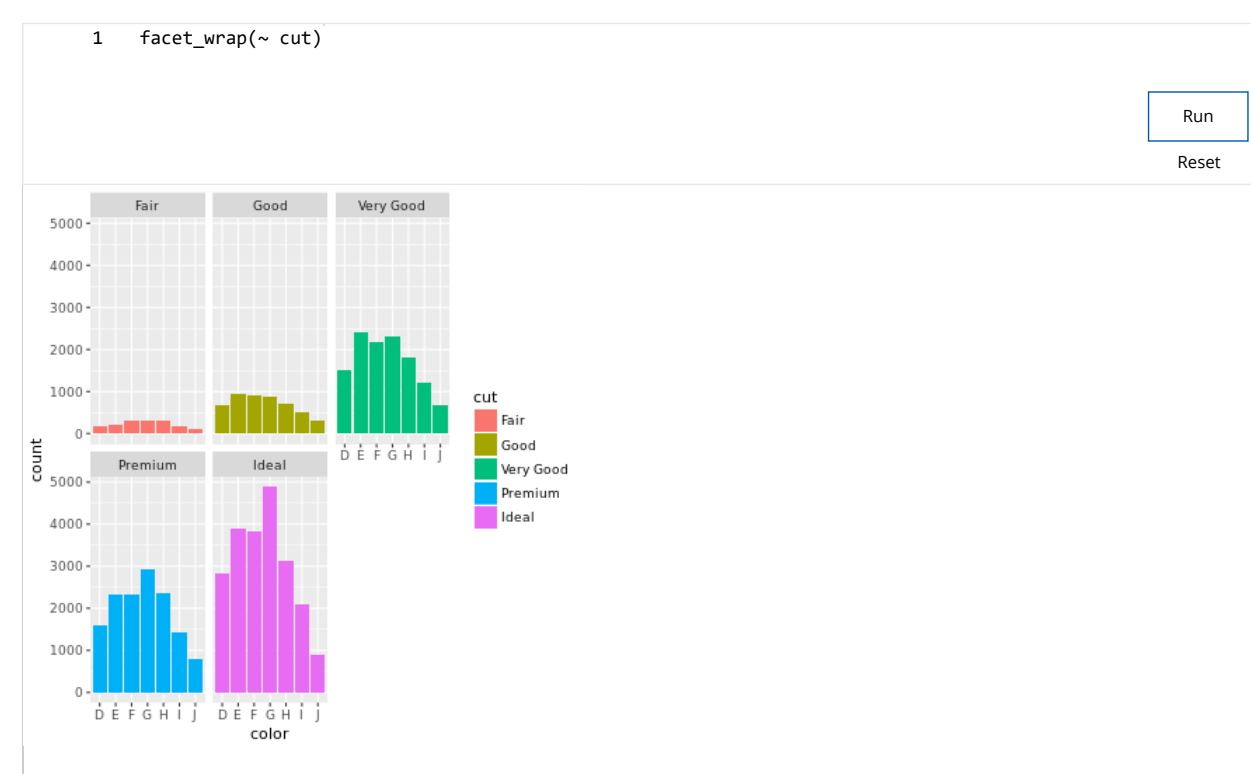
- ☐ The `geom_bar()` function
- ☐ The `geom_point()` function
- ☐ The `geom_smooth()` function
- ☒ The `geom_jitter()` function
- ☐ Correct

8. You are working with the diamonds dataset. You create a bar chart with the following code:

1 / 1 point

```
ggplot(data = diamonds) +  
  geom_bar(mapping = aes(x = color, fill = cut))
```

You want to use the `facet_wrap()` function to display subsets of your data. Add the code chunk that lets you facet your plot based on the variable cut.



How many subplots does your visualization show?

- ☐ 3
- ☐ 6
- ☐ 4
- ☒ 5

☒ Correct

You add the code chunk `facet_wrap(~cut)` to facet your plot based on the variable cut. The correct code is `ggplot(data = diamonds) + geom_bar(mapping = aes(x = color, fill = cut)) + facet_wrap(~cut)`. Inside the parentheses of the `facet_wrap()` function, write a tilde symbol (~) followed by the name of the variable you want to facet. The `facet_wrap()` function lets you display subsets of your data.

Your visualization shows 5 subplots.

9. A data analyst wants to add a large piece of text above the grid area that clearly defines the purpose of a plot. Which ggplot function can they use to achieve this?

1 / 1 point

- ☐ `title()`
- ☐ `annotate()`
- ☒ `labs()`
- ☐ `substitute()`
- ☐ Correct

10. You are working with the penguins dataset. You create a scatterplot with the following lines of code:

1 / 1 point

```
ggplot(data = penguins) +  
  geom_point(mapping = aes(x = flipper_length_mm, y = body_mass_g))
```

What code chunk do you add to the third line to save your plot as a png file with "penguins" as the file name?

- ☐ `ggsave("penguins")`
- ☐ `ggsave("png, penguins")`
- ☒ `ggsave("penguins.png")`
- ☐ `ggsave(penguins.png)`
- ☐ Correct