

cp8_assignment_instructions

Aidan O'Hara

2023-08-22

Exercise 1

Run `?anscombe`, briefly research who Anscombe was and write a short description, assigned to the variable `whoWasAnscombe`

Exercise 2

Use `sapply` to calculate the mean and variance of columns `y1-y4` in `anscombe`. Assigned to `anscombeMeans` and `anscombeVar` respectively.

Why is this response problematic?

Exercise 3

run the following code in your script

```
anscombe_tidy <- anscombe %>%
  pivot_longer(x1:y4) %>%
  group_by(name) %>%
  # Add a unique ID number to each group
  mutate(row = row_number()) %>%
  # Split the column at the first appearance of a number
  separate(name, into = c('xy', 'group'), sep = "(?<=[a-zA-Z])\\s*(?=[0-9])") %>%
  pivot_wider(names_from = xy, values_from = value) %>%
  select(-row)
```

Exercise 4

Finally, lets make a `ggplot`! Within `aes` assign `x` to `x` and `y` to `y`, use `anscombe_tidy` for data, and add `geom_point()`. Assign your plot to `firstGGplot`

Exercise 5

Lets add some specifics about `group` to `shape` and `color`. First, assigned to `colorPlot`, assign `group` to `color` within your `aes()`. Next, assigned to `shapePlot`, assign `group` to `shape` within `aes()`. Finally, assigned to `greatPlot`, assign `group` to both `shape` and `color`.

Exercise 6

Now to draw each **group** in a separate set of axis, use the `facet_wrap` function, specify that your `facet_wrap` makes 2 rows. Add the `facet_wrap` to `greatPlot` from before, updating `greatPlot`.

Like this: `greatPlot <- greatPlot + facet_wrap()`

Exercise 7

Lets add a line of best fit to each **group**! We'll again update our `greatPlot`, this time adding the `stat_smooth` function.

Exercise 8

IN every plot you make label everything! Lets add labels to our `greatPlot` using the `labs` function. Updating your `greatPlot` just like before.

Be sure you label `x`, `y`, `title`, `subtitle`, `caption`, and `color`.

Exercise 9

Finally, add `theme_minimal()` to your `greatPlot`, assign the new plot to `bestPlot`.