


Problem set 2

due Monday, September 16, 2025 at 11:59am (noon!)

Instructions Upload your .ipynb notebook to gradescope by 11:59am on the due date. Please include your name, Problem set number, and any collaborators you worked with in a text cell at the top of your notebook. Please also number your problems in some way and include comments in your code to indicate what part of a problem you are working on.

Get help! If you need support working on your pset, see our [week at a glance](#) schedule for office hours and pset support times!

 Warning: Avoid redundant loading

You will need the `tidyverse` library. Recall that Colab comes with this library already installed, and `tidyverse` includes `tibble`, `readr`, and `ggplot`. Avoid redundant loading.

Problem 1

Create the following tibble with the `tribble()` function (not `tibble()`). Use the `map()` function from the `purrr` package to calculate the `median` of each column, and store it as `col_means`. Use the pipe operator (`%>%` or `|>`) to pipe that list into `tibble()`, so the output is formatted as tibble. Finally, use `rename()` to rename the columns of your new tibble to `mean_height`, `mean_weight`, and `mean_age`. Return or print the resulting tibble.

```
# A tibble: 8 x 3
  height weight  age
  <dbl>   <dbl> <dbl>
1    150     45    18
2    160     54    21
3    165     60    25
4    170     68    30
5    175     72    34
6    180     79    40
```

7	185	85	50
8	190	90	60

Problem 2

Create a spreadsheet in Google sheets with data from the following table. Download your spreadsheet as a CSV file and upload it into Colab. Then, use the appropriate function from the `readr` package to import your CSV file into R. Return or print your imported data to confirm it was read in correctly.

trial_id	target_word	sentence_congruency	word_frequency	N400_uV	RT_ms
1	apple	congruent	high	-2.1	520
2	violin	incongruent	low	-7.3	760
3	doctor	congruent	high	-2.4	535
4	cactus	incongruent	low	-6.8	740
5	butter	congruent	low	-3.6	590
6	galaxy	incongruent	high	-5.1	690
7	window	congruent	high	-2.7	545
8	anchor	incongruent	low	-7.0	755
9	garden	congruent	low	-3.4	600
10	banana	incongruent	high	-5.4	700

Problem 3

Sometimes the best way to learn a new package or function is to explore the documentation. The `googlesheets4` package allows you to work with Google Sheets directly from R. Read the [documentation](#) for this package and figure out how to connect to a sheet, read its contents, and bring the data into R. Use `googlesheets4` to import the **Europe** tab of the gapminder sheet, available [here](#). Return or print the imported sheet to confirm it was read in correctly. You should see the following output.

```
v Reading from "gapminder".
```

```
v Range "'Europe'".
```

```
# A tibble: 360 x 6
```

```
  country continent  year lifeExp    pop gdpPercap
  <chr>    <chr>    <dbl>  <dbl>  <dbl>    <dbl>
1 Albania Europe    1952   55.2 1282697   1601.
```

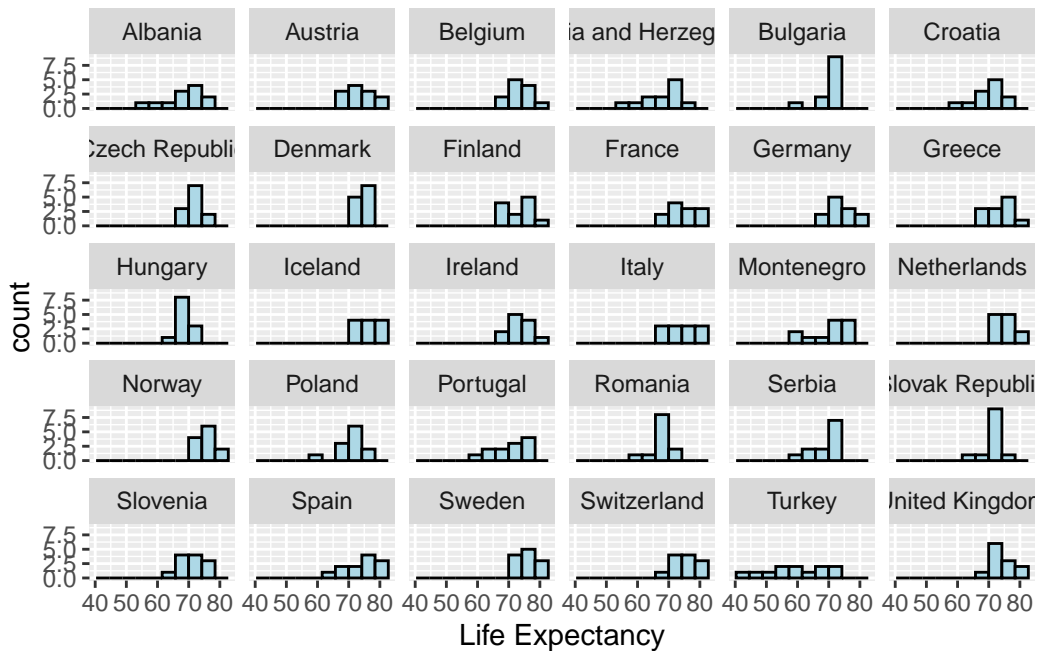
```

2 Albania Europe 1957 59.3 1476505 1942.
3 Albania Europe 1962 64.8 1728137 2313.
4 Albania Europe 1967 66.2 1984060 2760.
5 Albania Europe 1972 67.7 2263554 3313.
6 Albania Europe 1977 68.9 2509048 3533.
7 Albania Europe 1982 70.4 2780097 3631.
8 Albania Europe 1987 72 3075321 3739.
9 Albania Europe 1992 71.6 3326498 2497.
10 Albania Europe 1997 73.0 3428038 3193.
# i 350 more rows

```

Problem 4

With `ggplot2` and the `europe` data you imported in problem 3, recreate (as faithfully as possible), the following histogram of life expectancy for countries in Europe. Make sure the bars of the histogram are light blue, the border around the bars are black, and you edit the x-axis label to match. Also make sure you have approximately the same number of bins in your histogram.



💡 More coming soon!

Problems pertaining to Thursdays lecture will be added soon.