

Exercise

In this exercise, you will create a Quarto document that does the following things.

Problem 1.

Read in the CSV at `manctsui.github.io/datasets/timesData.csv` of [Times Higher Education World University Ranking](https://times-higher-education-world-university-ranking.com/). This file was taken from [Kaggle](https://www.kaggle.com/).

Problem 2.

Determine the rankings through the years of the undergraduate alma mater of the instructor for this course. To do this, you will need the function `grepl("keyword", column_name)` which returns true if the keyword appears within an entry of the column name and otherwise returns false.

Problem 3.

Plot the instructor's undergraduate alma mater as year vs university rank using `plot` in Base R or a similar function in `ggplot2`.

Note 1: The university rank column is given as a character, so you would likely need to coerce it to numeric via `as_numeric()`.

Note 2: Below is an example of a line graph in Base R.

```
1 # Define data
2 x <- c(1, 2, 3, 4, 5)
3 y <- c(3, 7, 8, 9, 12)
4
5 # Create a line graph with labels
6 plot(x, y,
7       main = "My Scatter Plot",      # Main title
8       xlab = "X Axis Label",        # X-axis label
9       ylab = "Y Axis Label",        # Y-axis label
10      type="l"                       # Line graph
```

Problem 4.

- Repeat Problem 3 for UC Berkeley.
- Put the UC Berkeley line graph and the Problem 3 line graph side-by-side within a Quarto figure.

Problem 5.

Did the number of US universities that rank in the top 50 change much through the years?

Task 6.

- Before the next class (Wednesday, September 23rd):
- Sign up for GitHub following instructions at <https://statisticsatrowan.github.io/lesson-5/#/publishing-to-github-pages>.
- GitHub will be where you host your Quarto-generated webpages.
- During sign-up, choose a username **appropriate** to employers. Your free GitHub Pages website will be at `your_username.github.io`
- (Optional) Download GitHub Desktop if you want to make uploading files to GitHub easier.