

Assignment 7

Complete each of the following exercises by writing the Python code required to get the given output. Put all of your code into a single Python file to submit it.

1. For this we will continue to use the datasets from assignment 6:

- Air quality
- U.S. Congress
- News aggregator

If you need to download them again you can do so at:

<https://realpython.github.io/gh-download/?url=https%3A%2F%2Fgithub.com%2Frealpython%2Fmaterials%2Ftree%2Fmaster%2Fpandas-groupby>

In the file that you submit you should repeat the code from assignment 6 that reads these datasets into pandas DataFrames so that they are available in the exercises below.

2. Write Python code that performs the following tasks:

- a) Get a summary of how many members of congress have served in each state by party affiliation over the nation's history. Extra credit: find a visualization for this data that is easy to read and understand.
- b) Produce a listing from the air quality data of the minimum, average, and maximum relative humidity by month.
- c) Repeat (b) but with summaries by week (1-53).
- d) How many news articles did each outlet publish in each category? Extra credit: find a visualization that displays this in a meaningful way.

3. Email your source code file as an attachment to prof. stucki. Change the extension to .txt before attaching it.

Due: Friday, 4/5/2024 by 11:59pm