

# Homework 11

For each assignment, turn in by the due date/time. Late assignments must be arranged prior to submission. In every case, assignments are to be typed neatly using proper English in Markdown.

This week, we spoke about Python. Python is an important language to know as a data scientist, in some disciplines, it is the dominant language, e.g. Deep Learning. In particular, Python 3. Our homework this week will be two problems as follows in Python 3.

# Problem 1

In Homework 9, you implemented a word cloud in R using python as a back end. In this homework problem, I would like you to duplicate that but in python only via a script. I.E. you should be able to call it using:

## Example

```
$ python wordCloud.py
```

## Problem 2

In Homework 6 and 7, you coded up a gradient descent algorithm to compute the roots of a function. Here, you will port that code over to Python. Note, you do not have to worry about parallelizing it or doing any other fancy speedups, just get it working in Python.