Week Six Reflection Journal

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The sixth week of this experiential learning activity was a challenge for me due to a busy workweek and a weekend filled with plans for Father’s Day, playoff hockey, and a round of golf. Despite these commitments, I was able to complete most of the activities that I had planned which amounted to another successful week of progress in learning Python. On top of the textbook reading, practice script assignment, and discussion board, my activities this week revolved around data visualization in Python.

**Learning Experiences This Week**

I began the week by reading chapter 5 of our Introduction to Scripting textbook. The chapter demonstrated working with data from text files and the internet. As I learn more about data analysis, I learn that data is not always stored in standard spreadsheets or relational databases. A competent analyst must know how to use many different methods to work with data in real situations. The textbook chapter described some of these methods as well as common tactics that turn the data into a python object so that it can be further used for cleaning, manipulation, and analysis.

After reading the textbook chapter, the following day I attempted to work on the practice script assignment from the module overview, which built on the concept of reading data from a file and using a Python program to return specific information based on the file. IN my opinion, this was the most challenging practice script, but I believe that I developed a decent working solution, although it may not apply to all text files the way that it does to our example file. From reading through the file, I determined that all punctuation marks, periods, exclamation points, and question marks denoted the end of a sentence. Therefore, in my solution, the number of sentences is determined by adding together the counts of each punctuation mark in the file. This solution might not work if the file included punctuation marks that did not denote the end of a sentence, as is often the case in most writing. This was my first time encountering what I believe to be a common challenge in programming, where a program can be built correctly for a basic example, but does not scale to more complex situations. I believe that it would be possible to build a program that returns an accurate number of sentences from any given file, but I can only guarantee that my solution works for the file at hand. I imagine that it is a common task for professional programmers to enhance programs so that they run correctly in situations that have not even been encountered yet.

After completing the weekly assignments and my initial discussion post, I turned my attention to data visualization with python. I have explored and practiced data visualization with ggplot2 in the R programming language, so I was familiar with many of the concepts that I encountered in my introduction to data visualization with Python such as bar/scatter plots and time series. I had hoped to read the entire data visualization chapter of Python for Data Analysis and watch two courses on Pluralsight, but I could not spend as much time on my activities this week as I had initially hoped. When reading the Python for Data Analysis chapter, I spent a significant amount of time installing jupyter lab and matplotlib on my computer before I could follow along with the examples. Next week, I hope to finish the book chapter and watch the second Pluralsight course. My introduction to data visualization this week gave me the idea that I will try to create a chart or two using a real dataset in Python as a demonstration of what I have learned in this experience for my Executive Brief. I will dig further into data visualization with Python next week, and then try my hand at diving into a data set in weeks eight and nine of this experience.

**Record of Project/Work Ideas and Their Current Status**

* Guessing game program
  + Not started
* Learn Python The Hard Way
  + 13/53 Python exercises
  + 15/15 Command Line Crash Course exercises
* Visualization with real data set in python
  + Completed 1/2 Pluralsight courses on data visualization
  + Read & followed code for first 7 pages of Python for Data Visualization Ch 8
  + Not chosen a topic/dataset

References

McKinney, William-Wes. 2012. Python for Data Analysis. *O’Reilly*.

Miller, Bradley and Ranum, David. 2017. Introduction to Scripting. *Jones & Bartlett Learning.*

Shaw, Zed A. 2014. Learn Python the Hard Way. *Addison-Wesley*.