Week Four Reflection Journal

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IT 697: Python Experiential Learning Activity

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Although I started slowly in the fourth week of this experiential learning activity, it turned out to be arguably my most productive week of the course. My activities this week wrapped up what I would now consider to be my month-long introduction to python and set the stage for me to continue building my python knowledge and abilities over the remaining six weeks and beyond. Through the first three weeks, I had read and watched videos about python basics, I worked though the installation and implementation of python with both the command line and using IDEs, and I had developed a few python scripts which accomplished basic tasks of creating and printing different objects. After this past week, I believe that I have covered enough of the introductory essentials, and I can begin the path towards working with real data and more complex analytical methods.

Since I previously participated in an experiential learning activity for the SQL programming language, I know that the final project requires demonstrating tangible activities in python that apply to the Data Analytics program’s core competencies. I know that at some point I will need to flip the switch from reading and watching videos about python, to actually working in python myself and developing scripts or programs that demonstrate what I have learned in this experience. Now that I know what python code looks like, how to create and execute the code, and how to import data into python, I am much more prepared for the second half of the course. My activities this week included reading two chapters from Python for Data Analytics, participating in the weekly discussion, reading the assigned textbook chapter and writing solutions to the practice assignment, and watching another lesson from Pluralsight’s Python for Data Analysts course.

The activity that will help me accomplish the most of my learning experience objectives, besides the time I spend writing python code, will be working my way through the Python for Data Analysis book. The book was recommended to me when I was interviewing for a data analytics co-op position, which will hopefully be starting in July. My main objective for this course is to be somewhat competent when it comes to importing, cleaning, and wrangling data in python, and this book covers everything that I could wish to learn about those topics in ten short weeks. The book is not too difficult to read and follow along. For me, it is similar to the times that I worked through books that were introductions to the R programming language, especially with the similarities between the pandas and tidyverse libraries. This week I read chapters 5 and 6, which, respectively, were an introduction to pandas and how to import different types of data, files, and databases. I am also working through the Python for Data Analysts course on Pluralsight, which covers many of the same topics, but in video format. To reinforce my learning of importing data, and to see it in action, this week I also watched the Importing Data: Python Data Playbook lesson from that course. The next chapters in the book, as well as the next lessons in the Pluralsight course are about data wrangling, or more specifically, cleaning, transforming, merging, and reshaping. I hope that I will be able to continue following along with these concepts, as I build on my foundation from the first four weeks of the course.

Another important activity for me this week was reading chapter 3 from the Introduction to Scripting textbook and coding solutions to the practice assignment. Only sections 3.1 through 3.3 were assigned, but I read all of chapter 3, because once I read about the transposition cypher, I could not stop until I read about some of the more complex and secure strategies for encrypting data. After I read chapter 3, I worked through the ten practice problems that were posted in this week’s module overview. In week 3, I was able to solve each of the practice problems on essentially my first try. This week, it started out similarly but the problems became harder as they went on. Some of them, as far as I could tell, even required creating functions that could take variables such as x,y, and z or A and B. These were the most difficult problems I have attempted in python, but I think I was able to develop functional solutions to all ten problems, even though I am sure some of them could have been solve more efficiently. Although it was a bit of a struggle, solving these problems gave me more confidence that I can now dive into more complex topics and into writing some python code on my own.

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

* Guessing game program
  + Not started
* Learn Python The Hard Way
  + 4/53 Python exercises
  + 15/15 Command Line Crash Course exercises

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*.