Week One Reflection Journal

Michael Surdek

Southern New Hampshire University

IT 697: Python Experiential Learning Activity

Dr. Bhanu Kapoor

May 16, 2021

I have chosen to participate in a second experiential learning activity in order to focus on a specific programming ability that is essential for any skilled data professional. This experience will be centered around Python. Python is a completely new programming language to me. Prior to this week, I had only a general idea of some of Python’s capabilities due to some limited experience in R and data analytics. Over the next ten weeks, I hope to develop a better understanding of how Python is used both for data analysis and for general programming purposes. My last experiential learning activity developed not only my SQL abilities, but also my knowledge and skills pertaining to things like research and time management which I believe will help me get the most out of this Python experience.

There is a chance that I start a co-op program with a medical devices company in July, which would be about seven weeks into this experience. The analysts use Python to clean and prepare the manufacturing data before using visualization tools to build applications that guide and assist the manufacturing process. I will not lack motivation throughout this experience because learning enough about Python in the next seven weeks will be critical for me to have any success in the co-op. Even if it falls through, I know that Python will play a big role in the work that I would like to do in the future. At this point, I do not know for certain what that work might be, but I hope that like Python, it is at the intersection of analytics and computer science.

**Learning Experiences This Week**

The first activity that I participated in this week was browsing through the course page, syllabus, final project and various resources. I was familiar with the general experiential learning activity setup, but I noticed a few differences. This experience provides a textbook and assigned readings. This will help guide what I plan to learn about each week, although I appreciate the flexibility that the experience provides for taking my learning in my own direction. There is also an assignment where we will demonstrate what we have learned by building a guessing game program. This type of assignment did not exist in my SQL experience, so I am looking forward to the challenge of the assignment.

I also read through and completed introductory sections of two textbooks that I plan to use as resources in this experience. The first textbook is Python for Data Analysis by Wes McKinney which was recommended to me when interviewing for the co-op position. I read the preface as well as the Appendix “Python Language Essentials”, which covered topics such as data structures and functions. Reading through the appendix helped me see what Python code looks like and it made me realize how similar it is to R, at least in terms of much of its analytical uses. The second textbook is Learn Python the Hard Way by Zed Shaw, which provides over 50 exercises to help people learn Python by directly typing out examples and going through the process of troubleshooting and discovering how the code works. I read the preface and then I completed the “Command Line Crash Course” was is an additional 15 exercises that accomplish common tasks such as making directories, moving files, and viewing documents. I am attempting to learn more about how computers work. I have ordered a laptop that operates on Linux Ubuntu with the hopes of starting to use my computer the way that “real programmers do”, according to everything I have read about the command line interface. I am not yet sure how or why the CLI and Python are so closely related, but I hope to develop my understanding of computers and programming to the point where I can integrate the two.

Finally, I participated on this week’s discussion where my classmates and I introduced ourselves and described how this experience will benefit us in future professional situations. I wrote about my background, my limited knowledge of Python and how I hope to build on the skills I have developed using R to become a more complete data analyst. I enjoyed getting the chance to read about my peers’ journeys to this experience and their professional aspirations. In my last experiential learning activity, I set a goal to participate in the discussion before Thursday each week, but I only accomplished it about half of the time. I once again intend to write my initial discussion post earlier in the week. I believe that doing so elicits the most responses and opportunities to receive feedback and questions about things that were unclear or that might lead me towards future research.

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

* Guessing game program
  + Not started
* Learn Python The Hard Way
  + 1/53 Python exercises
  + 15/15 Command Line Crash Course exercises

References

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

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