Week Nine Reflection Journal

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IT 697: Python Experiential Learning Activity

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In the ninth week of this experiential learning activity I faced both of what have been the largest challenges throughout this experience and my last SQL one. These challenges are an extremely busy work week and preparing to take some PTO, which adds even more to my already extensive workload. My department operates on a monthly cycle and the busiest time always takes place between the fourth business day and the thirteenth on the calendar of each month. The fourth business day of July was this past Wednesday and July 13th is this coming Tuesday, so I had a lot of work to do between then, including a 17 hour workday on Thursday and 10-12 hours on the other days. The fact that I am taking next Wednesday through Friday off for a wedding in Vermont did not make things easier. I can take time off pretty much whenever I want, but I am still responsible for my monthly workload. This means that when I leave on Tuesday, I need to be done with everything that I would need to do through the rest of the week. Because of these challenges, I was not able to start with my activities for this experience until Friday night. With the Executive Brief due today, I spent nearly all of the time that I could preparing that paper. My only activity this week that was not the Executive Brief or this reflection journal was working on my data visualization project that served as my work sample in the application of theories and program competencies section.

I began my activities on Friday this week by completing my data visualization project. I had already chosen a data set, found a relationship that I wanted to present, and created four subplot that demonstrated the relationship. All that I had to do on Friday was format the visualization, which was about as difficult as I expected. I have experience with visualization software such as Tableau and with ggplot2 in R, so I knew what I wanted to do and that it should be possible. Despite that, Friday consisted of searching google and flipping pages of my Python for Data Analytics book. I learned how to set axis limits, have plots shares axes, add space below the title, and some other customization features. Although my programming experience is quite limited, this process seems to be a regular occurrence for all programmers. It seems that even experienced programmers are always looking things up and maintaining dozens of open tabs on their web browsers while working on a project. I think it important and quite comforting to understand that you will never know everything you need by heart. Even as my knowledge grows, I will always be taking on more complicated tasks and projects, and I will always need to know how to find what I am looking for through the resources available to me in books and on the web. For this reason, the ability to research questions and problems is a key competency for programmers. This experiential learning activity along with the rest of my academic program have given me the opportunity to develop this skill, and I know that it will continue to be essential as I go further with my education and career.

After I had completed the data visualization project, I knew that the rest of my weekend would consist of putting together the Executive Brief. In my opinion, this paper is not only a way for our instructor to assess our experience, but it is also a chance to reflect on the last two months and put the experience into the larger context of our academic program and careers. I found it very helpful to describe the experience in the first section. I broke it down into a beginning, middle, and end, and I discussed why I pursued the experience in the first place. I also related my experience to my data analytics program outcomes and compared it to other classes I have taken in the program and in prior levels of education. Finally, I explained how I think this experience will benefit me going forward. At this point, it is clear that nearly all of the jobs that I expect to look for will require a working knowledge of python. Although I still have much to learn when it comes to python, likely more than I can even imagine at this point, this experience has given me the foundation to develop into a competent data analyst and statistical programmer.

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

* Guessing game program
  + Starting in module 10
* Learn Python The Hard Way
  + 18/53 Python exercises
  + 15/15 Command Line Crash Course exercises
* Visualization with real data set in python
  + Completed 2/2 Pluralsight courses on data visualization
  + Read & followed code of Python for Data Visualization Ch 8
  + Chose a topic/dataset
  + Created 4 subplots that show comparison I plan to demonstrate
  + Formatted subplots and overall plot into final visualization

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*.