

Lessons Learned

My first exposure to a programming language was Visual Basics which I dabbled in at a beginner level twenty years ago. In 2015, I started learning more about data visualization with Tableau, which lead me to also delve a bit into R at that time. However, I got sidetracked with responsibilities and deliverables at work and there was a hiatus till the 'COVID era' when I decided to resume my quest in data sciences.

In March 2020 with the advent of COVID-19 our daily activities were disrupted. I lived and breathed either at work or in my living room at home, and I needed a hobby or activity which I could pursue from the couch in that living room. Preferably one that I enjoyed and found challenging but could also apply in my daily work in the future.

I work in healthcare as a pediatric radiologist – I look at images of the human body all day long, detecting normal and abnormal structures, and forming an interpretation of what I see for other providers. My specialty is very dependent on computers and applications. An application may be used to transfer multiple blood velocity measurements the sonographer has made to the report the radiologist generates or alternatively provide templates for a radiology report. How well those applications run has a huge impact on how efficiently I can get my work done – and they do not always run smoothly.

In addition, with the more recent renewed interest in machine learning (including its applications to imaging) there has been a wealth of publications on this subject in radiology. I wanted to contribute to that literature and to do so I need to learn machine learning – which may be an unrealistic goal given all my other responsibilities, but in the new world of COVID-19 I had the time and the will to take the first steps in this journey.

University of Washington offers multiple, online educational opportunities as 'Professional and Continuing Education' courses or certificate programs. To be eligible for the 'Machine learning' certificate program I had to fulfill several prerequisites (such as Python Programming and Data Sciences). 'Foundations of Programming: Python' was the first prerequisite course that I took in this 3-year long journey.

When I started learning Python my original thought was that this is the only programming language I will ever learn and then I will delve into data sciences and machine learning. However, the way this course was structured and taught made me curious about programming languages and reinforced that once I learn to think as a programmer learning a second or third programming language will be much easier.

I also discovered that I enjoy programming because of its inherent logic. In contradistinction to medicine in programming there is always a straightforward and logical way to do things (i.e., write script). And you can make mistakes – the script will fail to run and give you an error message unless it is a logical error – and correct those mistakes as you run and test your scripts. These 'practice runs' are fun and getting the script to work with efficiently written code is fulfilling!

I am a life-long learner and applied my experiences and knowledge in learning in the medical field to learning programming, including reading extensively and taking notes. I diligently spent 15-plus hours each week reading and understanding the materials offered in each module. I firmly believe that in life there are no short cuts and that you reap what you sow – and it all starts with the basics and having a solid foundation.

I think this course has laid the grounds for me to have a solid foundation in programming on which to build. I will follow this course, with the Python Programming certificate course and then the Data Sciences course. I will probably take detours into other programming languages and learn how to develop interactive web pages and applications.

I enjoyed listening to Mr. Root's pre-recorded modules (and pausing them to dig deeper into a subject), Ms. McKeever's detailed media feedbacks to our assignments, and sharing scripts and feedbacks with my fellow classmates. Thank you all!