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Foundations of Programming: Python

Assignment 10

Lessons Learned

This course has taught me a great deal about functional, object-oriented programming and how to write easy to understand code for solving unique problems and creating useful tools. I began this course with roughly a year of informal self-taught experience with Python. I treated a Python script like a top-down series of variable assignments followed by creating data frames, manipulating, or cleaning the data frames, and finally exporting the data to a csv. There was not a lot of thought on treating data like objects.

This course helped me understand the importance of classes and modules and functions within them are useful in setting and getting attribute data from an object, versus my previous approach on a linear top-down hack and slash approach to brute force my way into a data frame output I wanted. Learning separation of concerns and finally main scripts and custom modules really improved my understanding of how well written programs should solve problems. Understanding ‘Pythonic’ style and the emphasis of commenting is important when collaborating with other programmers or engineers/end users that may not have strong coding skills. It is always important to carefully document your work in all things, but it is especially important in coding.

I was skeptical at first of the long write-ups for each module assignment, but I feel like I truly learned more by writing about what problems my assignment solved, and how I went about accomplishing the task. Writing about what your program does and how it executes tasks is extremely important in today’s world of widget, blog, website, tool, etc. development and deployment.