Final Project Report/Assessment: CSPB 3112 – Christopher Taylor

- Vision statement: how will this project expand your professional skills and knowledge?
    - I will be gaining knowledge in one of the most in-demand languages (Python) and one of the most in-demand careers (data science) to not only make myself more capable, but also more enticing to potential employers.
    - **This goal was achieved. I learned lots of tips and tricks of Python syntax and got a good foundational understanding of Data Science and life as a Data Scientist. I look forward to continuing my learning via LinkedIn with loads of valuable courses available. I'll probably be focusing more on Data Science and less on Python, since I think Python (and R) can be learned better in other formats.**
- Motivation: why is this project important to you?
    - With my background in Molecular Biology research, I know the high demand for data scientists. With technological advances in research equipment and instruments, Biology labs are now producing more (mountains) of data than Physics labs (historically infamous for the sheer volume of data). My data science skills coupled with Biology knowledge and experience will be highly sought after. Moreover, I'll be helping with medical research that could enhance people's lives, possibly even save them.
    - **This motivation is still the primary motivator for me. I think learning more about the R programming language and other useful tools will make me a more competent and versatile Data Scientist as well. I'm hoping to eventually get a job doing bioinformatics for a medical research company, so these skills are essential to accomplishing that career goal.**
- Specific and measurable goals (learning objectives) for the project.
    - Finishing the courses focused on Python and Data Science that I've found on LinkedIn. Many, if not all, of the courses come with a certificate of completion. I'll start with Python Essential Training (4.5 hours) and Learning Python (3 hours) to understand the basics of the language, then move on to more advanced concepts with a focus on Data Science, Python for Data Science Essential Training parts 1-2 (10 hours), after that move to Advanced Python and the Data Science of Healthcare, Medicine, and Public Health. If I get through all of that and still have time to spare, I'll probably look at Master Excel for Data Science (16 hours).
    - **I overestimated the number of LinkedIn Learning courses I would be able to finish. I was only considering the times of the lecture videos and not considering my note taking, chapter exams, final course exam, weekly report writing, etc. I plan to continue my learning with the aforementioned courses that I have not yet done.**
- Risks to project completion, possibly including:
    - new language
        - Python is new-ish. I've had a bit of training in CSPB 1300, but I could definitely use a lot more practice, and since this is one of the primary languages used across different industries, gaining ability with it would never hurt.
        - **I still feel like an amateur when it comes to Python syntax. I know it's an extremely powerful and useful language, so I will continue my study and advancement with this language and I also plan on learning the R programming language since I've heard that R is used often in research settings.**
    - no prior experience working with the subject or technology

        - Data science is all new to me as well, so this could definitely be a challenge. Gotta learn it sometime though, so might as well start early.
        - **The Data Science Fundamentals course that I completed has really set me up with a solid base of knowledge about Data Science. I will continue learning more via both LinkedIn Learning AND by taking Intro to Data Science with Probability and Statistics this summer.**
    - project requires of some resources that may be difficult to obtain
        - The worst part is that I have to pay for a subscription to LinkedIn Learning (40/month or 240/year)
        - **At first I was disappointed about having to pay for a subscription to LinkedIn Premium to gain access to LinkedIn Learning; hindsight being 20/20 makes me glad that I did. I discovered how many valuable courses are available and plan to continue using said courses for further career advancement and knowledge/skill acquisition.**
- Mitigation Strategy for the risks listed above
    - Not really sure on this part. Practically everything in computer science is new to me, since I'm only in semester 2, so I'm going to have to keep my head down and grind it out as best as I can.
    - **I was apprehensive at first, but after taking a course on Time Management via LinkedIn Learning, I soon found a good rhythm for learning these new concepts and methods to my madness. I found the subjects interesting, so that also helped keep me focused. Moreover, I think a lot of my problem early on was that I hadn't adjusted to the pace of my classwork, but once I did, things got much easier to handle.**
    - I might have to do a bit of math refreshers if I'm struggling to understand the math behind Data Science, but I won't really know until I get into it.
    - **I'm still slightly worried about my summer semester since I'll be taking Linear Algebra and Intro to Data Science, then in the fall semester I'll be taking the CSPB Calculus class. I know these classes are vital to success as a Data Scientist, but I'm still a bit concerned that I'll struggle with the math involved in each. If push comes to shove, I'll just have to supplement my knowledge with YouTube lectures or other LinkedIn Learning courses.**
- Project Assessments - provide a list of evaluation criteria for the project.
    - Describe how you will know that your project is completed and that you have met your goals.
        - I will be progressing through the courses, passing the quizzes, getting certificates for completion.
        - **All quizzes passed and certificates received. I will post the certificates to my GitHub link below.**
        - Also, I'll become more capable and knowledgeable in both Python AND data science in the process.
        - **I definitely feel much more knowledgeable in both subjects, but I also learned how much I still don't know about them, so I'll continue the grind and keep gaining more knowledge/skills to pay the bills.**
- Project portfolio link:
    - https://github.com/Bockslunch/CSPB3112_Project.git