#3 Writing Assignment: Narrative

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Cyber security is a degree that can not be summed up by just one discipline. There are so many applications and intricacies that many disciplines have to be known in order to understand and summarize a problem. Disciplines like criminology, networking, and coding are extremely valuable to the field of cyber security. Most important of all, my internships at Minnick schools and Brooks Crossing have helped me develop a better understanding of what I should do in real world scenarios and develop a better understanding of how the world of IT and Cyber security work; as well as the ability to communicate with others. These have all been invaluable assets to my growth through my scholarly journey. These experiences have also given me the opportunity to apply my skills and knowledge to real-world problems and gain valuable experience. I have also been able to build strong connections with mentors and other professionals in the field, which has been a great asset to my career. I plan to explore the overarching themes of how these courses have influenced me and made me a better student and person.

Cyber security requires a broad knowledge of tools and systems. Courses like windows servers and networking as well as linux showed me that I have a lot that I had to be proficient in. Originally I thought cyber security was just coding and hacking. My thinking started to change as I got further through my courses however. I learned that cyber security is much more than that. It involves understanding the importance of protecting networks, systems, and data. It also requires an understanding of security protocols, risk management, and incident response. THese were all displayed to me through in class lectures and my labs. Being able to set up a firewall and defend against attacks from other systems is an extremely in depth and arduous process. This understanding of always having to keep up with the times as cyber security is ever evolving made me want to learn more than I had originally. Learning how to attack and defend lead to a deeper understanding of how systems respond. This made me realize how proactive I had to be

in order to keep growing in the field. I faced many challenges through my student career. Most of all in a Virginia cyber range competition at Blue Ridge Community College. I had to use my cumulative two years of experience in classes to solve hacking puzzles. Being able to jump from password cracking, open intelligence gathering, python coding, and packet sniffing was a challenge. Being able to go back to artifacts like my labs and screen shots of my command line work I was able to excel at this competition and solve many of the complex puzzles and score highest in my class at BRCC. This has greatly influenced me in my ability to reflect on past work and often find solutions to current problems. Reflection has become one of my most powerful tools that I will take into the future. I often refer to a quote by Albert Einstein when I think of how reflection has become a powerful tool. " A wise man will never memorize what he can look up." I believe this is absolutely true having 3+ years of coursework saved has helped me pick out flaws and hone my skills. Being able to have python, XML, HTML, CSS, and Java code that I can go back to has allowed me to further course work and correct mistakes I have made in the past. Reflection has been a core pillar of my student life and it will carry on to my professional career.

My two internships have helped make me ready for the work force and have taught me one of the most valuable skills in the workforce, communication. I often prefer to work alone so this was a hurdle for me. In my fist internship at Minnick schools I was mainly IT focused and mainly spent my time working on computers. I had to document the repairs for each computer in depth and submit them to my boss. Being able to describe what I did step by step at work may seem simple. It however was very tedious having to constantly say what port I would be changing or the serial number of a battery I was installing on a student's computer. This also included the time the project started and the time the project ended and a before and after

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diagnostic of the part I was adding to the student computer. At the time I was extremely annoyed with this kind of work. I hated having to document every step. Reflecting on this however; The level of documentation that I would communicate made sure that I almost never made an error and allowed me to retrace my steps. My second internship at Brooks Crossing had me tackle a whole new side to communication. My goal was to help classrooms full of kids understand basic cyber and IT concepts. This required the ability to articulate concepts that were complicated to a group who may not understand an entire concept. The three most important things I learned were how to keep students engaged, make the topics easy to understand, and allow for the kids to see the result of their project. In order to do this I had to take information like the documentation at Minnick schools I had written and be able to summarize it effectively almost on the spot. This was the most prevalent when I taught some basic coding on robots. I was able to keep the kids engaged during the process by making it into a sort of game where I showed them the basics like making a robot move and turn, then I challenged them to try new things and see what they could edit and get to work. I was able to communicate the basics of coding, then reinforce it by having them try to experiment on it, and the challenge aspect kept them engaged. I can see this level of engagement being very useful in my later career if I have to present to a group I will be able to keep it concise and informative. I will also apply this when I have to write summary reports to my boss. Having this ability to know the time and place for different kinds of communication will help me greatly in cybersecurity. It was hard having to relearn how to communicate and I am extremely grateful that I did. This skill will also be useful in my professional life when it comes to building relationships with colleagues and clients. It will also help me to have better conversations with my team when discussing cybersecurity strategies.

My biggest challenges I faced were with my cyber ethics and my interdisciplinary class. I never thought there were that many ethical implications involved with cybersecurity unless someone was on the "bad guys" side and hacking. A project that really stood out to me was a whistle blowing case where an American helicopter killed civilians for no reason at all. Being able to expand upon the ethical implications involved with betraying a country for a humanitarian cause was something I never saw being related to cyber ethics. When I asked my professor about this he reminded me of the CIA triad: Confidentiality, Integrity, and Availability. In essence breaking the Confidentiality and integrity within the army. This led to me having a new view of what I need to watch out for in the field of cyber security. My IDS class also helped me understand just how many fields can be involved in cyber security. For instance I had no clue how involved law was in cyber security. I plan to use my artifacts that exemplify that cyber security is everywhere and expands into every discipline. For instance my cyber law and cyber war papers. This will help me show how I understand that cyber security is not just related to one field and can be endlessly expanded and evolved as I have come to learn.

Cyber Security is an endlessly expanding and evolving field and my classes have done an excellent job of showing me that. Being at Blue Ridge helped give me a better understanding of how many tools and systems I needed to know. This led me to include some of my linux and python labs as artifacts in my e-portfolio. Understanding how these tools worked is only half the beetle though as my internships have prepared me to communicate either at a surface level or an intricate level. Having my experiences in my internships as artifacts will help me be a strong communicator and a good asset to a business. Lastly, my Interdisciplinary and cyber law classes have shown how much more there is to cyber security than just working with machines and how it can encompass nearly every single job field on the market. Including papers from both of these

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courses will show my knowledge in how cybersecurity is an ever expanding field and it is essential to always be a lifelong learner. My coursework has equipped me with the knowledge and experience necessary to be a valuable asset in any business. I am confident that I can apply my knowledge to real-world scenarios and help businesses stay secure and protected. I have a passion for cybersecurity and a desire to stay up to date with the latest trends and technologies. I am confident that I have the skills and knowledge to be a successful cybersecurity professional. I am excited to explore new opportunities in this field.