

Final Reflection Essay

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Introduction

Reflecting at my time at Old Dominion University, I have grown and learned more than I could've ever imagined. It's been a long but promising journey filled with determination and hard work. Even though the coursework was difficult and time consuming, it forced me to grow in multiple skill sets. These skill sets include technical, critical thinking, project development, communication, and even team leadership. Over my time at Old Dominion University, I had the opportunity to work on projects/assignments that helped me gain a lot of knowledge in the cybersecurity field. Creating an ePortfolio was a great way to showcase and demonstrate everything I've achieved and created over the past few years. An ePortfolio is somebody's collection of work and projects used as evidence to showcase their learning over time in an electronic format. Creating this ePortfolio encouraged me to take full responsibility for my learning and can demonstrate it to whoever is interested! It provides me an opportunity to possibly further my chances in creating connections in my cybersecurity career as well. The 3 skillsets I'll mainly highlight in this reflection paper and I believe define me the most are my technical skills, critical thinking skills, and project development skills. I was able to evaluate these were most likely my top 3 skillsets by assessing my educational career's full body of work. The more courses I took over time, the more I was able to understand that even if something was unrelated to my major it could still possibly apply. Even courses unrelated to cybersecurity have helped me learn and develop valuable skills I will take on and use in my future.

Technical Skills

Technical skills are a key essential when working in any technological career field, including cybersecurity. With technology continuously advancing at a rapid pace, we must be able to properly provide the necessary hard skills needed to efficiently work. This skill is slightly different than my others because it isn't a soft skill. Soft Skills can be learned over time as you gain longer experience and put more time in. Throughout my courses at Old Dominion, I was able to accomplish many set objectives. These objectives included the ability to manipulate and protect computer systems and networks along with stored online data from potential cyber threats/attacks, apply successful troubleshooting practices, and investigate and collect forensic evidence for network security. Old Dominion provided a bunch of hands-on assignments and activities that have allowed us to grow our skills. These artifacts that I decided to showcase reveal how I've grown and learned multiple technical skills.

Final Python Socket Programming Game

Before I was able to learn any advance networking and programming, I had to start at the basics. In the CYSE250 Basic Cybersecurity Programming and Networking course, we're taught the basics of a programming language called Python. Python is a computer programming language that is generally used to build websites and software, automate tasks, create cyber detection algorithms and even conduct data analysis. In this artifact, I was tasked to create a game in Python using a socket programming method. A socket is a method for accomplishing inter-process communication. This basically allows one process to communicate with another process on the same or different machine efficiently. In my

game, players connect to a server and take turns guessing a 4-digit number. The server generates a secret 4-digit number with unique digits at the start of each game.

Cybersecurity Network and Security Hands-On Labs

IT315 Introduction to Networking and Security was one of the most interesting courses I took at Old Dominion. A lot of our assignments were very hands-on and applied. This course required technical skills along with critical thinking. In this course we did hands-on labs like wiring our own ethernet cables and even practice cyberattack detections. In this cybersecurity networking and security course, our primary focus was practicing prevention of unauthorized users, ensuring secured access for authorized users, and prevention and detection of cyber threats and attacks. I posted a few lab assignments that illustrate different technical skills that were applied to the labs.

Website Design (WordPress)

Going through all my artifacts, it was a little difficult to find a third artifact that could be used for a technical skill. IDS493 IDS Electronic Portfolio project helped me gained the skills needed to properly create and design a well running website. In this course, our goals were to successfully develop an ePortfolio that demonstrates academic, self-assessment, and entrepreneurial skills using electronic tools. The ability to use our electronics to create a platform that represents someone, or something is very similar to the skillset needed for a website developer. With this skillset, you will also need to attain the ability to critically think. The next skillset I will discuss and showcase in the ePortfolio, is my ability to critically think.

Critically Thinking Skills

Critical thinking skills are the most important skills, in my opinion, to obtain in any workforce career. In cybersecurity, developing critical thinking skills can improve both efficiency and effectiveness. Obtaining this skill allows an individual to distinguish relevant and irrelevant information, improve their problem-solving skills, and even develop and implement different solutions and countermeasures. With technology advancing and growing tremendously, these advancements and rapid changes must be able to be controlled and contained. Rapid changing makes it difficult for an individual to see the final solution step by step and may cause the individual to solve it by thinking “outside of the box” with the information presented. Throughout my time here at Old Dominion University, I’ve been able to recognize this skill and determine solutions to critical situations that may have been difficult prior. A lot of my courses like basic cybersecurity programming and networking, cybersecurity techniques and operations, cybersecurity fundamentals, networked system security, operating systems, digital forensics, etc. required me to be able to find and create solutions to difficult topic and questions. In my ePortfolio, I showcased different artifacts that discussed topics including militarized cyberspace, Pegasus spyware controversies, COVID-19 pandemic, and even digital forensics labs that were completed. With a bunch of content that displays my ability to critically think, I’ve decided not to go into depth on each artifact. Each artifact is described and is pretty self-explanatory when presenting my skills. Below I’ve listed each artifact’s name along with the course.

CYSE495 Topics in Cybersecurity – Militarized Cyberspace

CYSE250 Basic Cybersecurity Programming and Networking – Militarized Cyberspace

CS462 Cybersecurity Fundamentals – Pegasus Spyware Controversies

IDS300 Interdisciplinary Studies – COVID-19 Vaccine

CYSE494 Entrepreneurship in Cybersecurity – Evolution of Elon Musk

CYSE407 Digital Forensics – Digital Forensic Labs

CYSE 406 Cyber Law – Cyber Law Aide

Project Management Skills

The last skill I decided to showcase in my Portfolio was my project management skills. This skill was a little harder to identify in myself, and at first, I was unsure if I had obtained it or not. At first one may think and question, “what does project management have to do with cybersecurity?” To answer this question, cybersecurity project management is a critical piece in solidifying safe ecosystems and preventing malicious cyber threats and attacks. Managing risk, creating project objectives and goals, and determining responsibilities and roles are all necessary skills needed to be the most reliable and efficient project manager possible. Below I will discuss the artifacts I have showcased that show my ability to establish goals/objectives, create and understand risk management plans in the cybersecurity field, and show communication skills with an active entrepreneur/project manager.

Entrepreneurship Business Plan

This artifact is one of the coolest assignment/projects I think I’ve ever done. For my CYSE494 Entrepreneurship in Cyber Security course, we were challenged to create a successful business plan. Even though this business proposal isn’t cybersecurity related, it

gives multiple examples of the skills I have. For this proposal, I created a plan to open a food establishment that recreates traditional dining and socialization experiences. In this plan, I executed the ability to organize and manage, set business goals, create products and services, create an industry analysis, develop marketing and sales strategies, and more.

Mitigation and Risk Assessment Paper

For my CYSE495 Intro to Cyber Risk Management course, I was asked to discuss both mitigation and risk assessment. In this paper, I also explained the importance and process of formulating a business continuity plan, business impact analysis, a disaster recovery plan, and a Computer Incident Response Team Plan while highlighting how these strategies can assist an organization in mitigating potential risks and ensuring operational resilience. Risk assessment and risk mitigation both fall under management risks, which are a key trait if you are a project manager. Developing project plans to reduce risk and security threats is huge in any cybersecurity job and a great skillset to acquire.

Interview an Entrepreneur

Last but not least, this is the last artifact that I added to my electronic portfolio to showcase all my experience, skills, and quality traits. This artifact was placed under my project management skills because a successful entrepreneur gave me key advice to using my project management skills to create something successful. In the interview he gave insight and tips on creating objectives/goals and determining roles and responsibilities within a business. This can expand across every business type, which is beneficial to me on acknowledging it early.

Conclusion

Technical skills, critical thinking skills, and project management skills are all important and necessary skills to possess if you want to be successful in the cybersecurity field. Old Dominion University has provided multiple courses and opportunities to teach and install these key skills before I go off into my cybersecurity job field. My ePortfolio gives me an opportunity to showcase all my experience, skills, artifacts, and even certifications once I acquire them in the future. I can proudly say each one of the courses Old Dominion University has provided, cybersecurity related or not, has all helped develop the skillsets I have gained, which can create me into the best worker I can possibly be! I will take everything I've learned and continue to grow. All of my experiences and learned abilities gained over the last few years have prepared me for a prosperous and successful cybersecurity career.