Reflection Essay:

My Opinion on IDS-493 and My Reflective Learning Experience Upon Achieving a Degree

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IDS 493

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December 3, 2024

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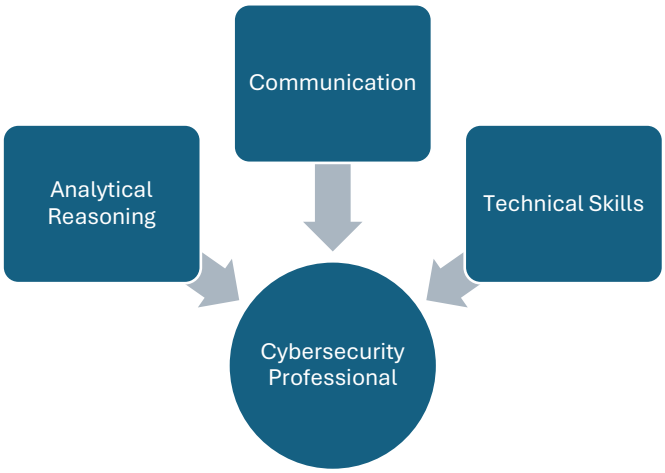
Introduction

When the time came, I didn't understand why I needed to enroll in Interdisciplinary Studies (IDS) 493. I was vaguely familiar with the tools ODU provides for website configurations and fooled around with the idea of making an ePortfolio in the past. However, the moment I started thinking critically about some of the questions put forth in discussions and assignments, I slowly became more intrigued with the benefits of this project. The final Electronic Portfolio Project was designed to consolidate and present the skills I've acquired during my years of study. That project, where this essay is provided, will be crafted and organized according to my academic journey. I have enjoyed the ability to look back on my work and apply it to this creative medium. Furthermore, this essay will elaborate on the top three most marketable skills learned from a Degree in Bachelor of Science with supplementary insights from other disciplines. IDS 493 promotes an interdisciplinary approach to narrating my career readiness, so supporting artifacts were constructed from a combination of different subjects and methods to prove my learned skills. Having the ability to demonstrate these learned skills, is essential for my introspection and necessary for future employers to observe.

This Reflective Essay will describe how specific artifacts demonstrate my top three skills and discuss how academics and other experiences contributed to my career readiness. In performing my due diligence, constructing job ad analyses, and observing the requirements that employers seek, I was able to determine the skills that best translate to a career in cybersecurity. I

have concluded that, to be successful one must possess analytical, communication, and technical capabilities to carry out the roles of a cybersecurity professional. ODU's Cybersecurity program has been a great tool for generating these necessary skills. I have had the opportunity to relish past and present courses and other forms of work to give my artifacts interdisciplinary focus in demonstrating these skills.



Skill: Analytical Reasoning

Analytical reasoning is an essential skill crucial to success in a cybersecurity career. Radford University believes, that "employers want students to possess analytical reasoning/thinking skills – meaning they want to hire someone who is good at breaking down problems into smaller parts to find solutions" (Radford, n.d.). Analytical thinking often requires someone to use various methods to solve complex problems. It involves a level of knowledge applied to critical thinking skills to identify patterns, trends, interpretations, and solutions amongst data. Analytical reasoning is also foundational to problem-solving which, in cybersecurity, is imperative to identifying vulnerabilities, threat analysis, and incident response.

IDS-300W Interdisciplinary Theory and Concepts – The Market Expansion of Ultra-Processed Foods (UPFs) and Public Health: ID Research Paper

Another Interdisciplinary course I studied at ODU was Interdisciplinary Theory and Concepts (IDS 300W). In this course, one must take part in the examination of the history of interdisciplinary studies and how it can be used to improve your writing, thinking, and research.

This assignment was constructed of my interest in researching the question, “Is the increasing availability of Ultra Processed Foods (UPFs) a threat to public health?” The ID research process I used throughout this paper is methodologically a necessity for problem-solving and analysis in the cybersecurity environment. I was able to compose a clear and concise question of a complex problem and produce adequacy amongst multiple disciplinary insights to formulate this essay.

CYSE-495 Introduction to Cyber Risk Management – Importance of Formulating Proper Plans in Risk Mitigation: Final Exam

This course focuses on the topic of risk management within the cybersecurity discipline. The artifact I chose, from within this course, was the final exam writing prompt because it accumulated the knowledge learned throughout the course. This writing was composed of an in-depth understanding of different aspects of risk assessment and mitigation. Specifically, this artifact proves analytical reasoning through an evaluation of important process formulation for ensuring operational resilience.

CS-464 Network Systems Security – Module 11 & 14: Systems Security & Wireless Security – 802.11 Quiz

Network Systems Security (CS-464) is another cybersecurity-based course. Its’ focus is on essential applications and standards to produce secure cyber systems. The Module 11 and 14 quizzes were chosen as a supporting artifact to analytical reasoning because in the application aspect of cybersecurity, one must have a deep understanding of how software and systems operate. In these quizzes, I was able to analyze the questions meticulously to provide suitable answers for a successful grade.

Skill: Communication

Communication and teamwork skills are vital to cybersecurity success. ISC2 comments, "One of the most important skills a cybersecurity professional needs [is] the ability to communicate effectively, be that out to the wider organization, or upwards to the board to escalate issues and inform key decision-makers" (ISC2, 2024). Within the realm of cybersecurity, collaboration and communication are necessary to mitigate potential risks, ensure compliance, and effective incident response. Furthermore, achieving and displaying strong communication skills is most effective interdisciplinarily; hence, the artifacts I have chosen are derived from three separate disciplines.

Artifact 1: Photo Gallery of Construction Projects (2022 – 2024)

Over the years, apart from being a full-time student, I have worked hands-on in Marine Construction. Common knowledge in the construction profession; without teamwork and a thought-out course of action, job quality is poor and timelines are not kept. Developed strong communication and interpersonal skills by working closely with clients, contractors, and subcontractors, which is proved through this supporting artifact. These necessary skills learned from Construction, are essential in the cyber field. For example, getting your cyber message across to overseeing officers is an important part of the job. If you cannot convey the problems using best practices; businesses, networks, and lives could be at stake.

CRJS-406 Cyber Law – Writing Assignment 1: Memorandum Exercise

Cyber Law (CRJS-406) is a core course I took at ODU. This course consists of legal requirements of the digital world and a basic understanding of legal authorities. This writing assignment I chose to be a supporting artifact of communication, is a memorandum formatted response to various questions that a CEO of a political social media platform requested. I chose

to add this as a supporting artifact because it proves my ability to forward a professionally written response to the CEO of a company. It is important to have good online written communication skills in a cybersecurity career because it enables experts to communicate intricate technical ideas to individuals without a technical background.

CYSE-250 Basic Cybersecurity Programming and Networking – Applied Aspects of Python and Cybersecurity/Networking: Group Project

This Basic Cybersecurity Programming and Networking (CYSE-250) course used Python as its' focused programming language and helped students develop the understanding to solve common problems in the computer science environment. The artifact chosen for this course was a group project focused on demonstrating knowledge applicable to solving a related problem to cybersecurity. I chose this as a supporting artifact to communication because it is a first-hand experience of collaboration to solve a problem related to cybersecurity.

Skill: Technical

To any cybersecurity professional, they must possess the hard skills to get the job done. Old Dominion University allows students to practice and learn these skills through application courses. Although areas within the cybersecurity field require different forms of technical strengths, one must apply to a field that best suits their abilities. However, the know-how used to achieve some of the fundamental technical skills can demonstrate your proficiency to adapt and expand on your expertise.

CYSE-270 Linux System for Cybersecurity – Advanced Network Configuration: Lab

I chose this lab as a supporting artifact for technical skills because it demonstrates advanced network configurations. Cyber professionals must wield the ability to properly

configure networks to safeguard operations from vulnerabilities and adhere to compliance regulations and best practices. In this lab I worked as a network admin, configuring the desired network topology for managing user permissions. For example, I connected two virtual machines to the same network for the purpose of allowing IP forwarding of the gateway program. This was performed by various commands prompted in Kali and Ubuntu VMs.

CYSE-450 Ethical Hacking and Penetration Testing – SQL Injections: Assignment 9

Ethical Hacking and Penetration Testing (CYSE-450) was a very useful course for practicing and furthering my applicable technical skills. In this course, students learn how to operate industry-leading tools and frameworks on multiple computer environments. The assignment I chose as my additional technical supporting artifact was SQL Injections: Assignment 9 because "SQL injection is one of the most common web-based attack[s] which is used to execute malicious SQL statements" (Vatsa, 2024). Having a background in ethical hacking is important for offensive and defensive cyber careers.

CYSE-301 Cybersecurity Techniques and Operations – Reverse TCP attacks: Lab 4

In this course, students learn various cybersecurity tactics using different forms of software tools. The tools and techniques learned, "are used to secure and analyze large computer networks and systems. Advanced packet analysis, configuring firewalls, writing intrusion detection rules, performing forensic investigation, and practicing techniques for penetration testing" is the goal of completing this class (Old Dominion University, n.d.). I chose this lab as a supporting artifact to technical skills because it involved problem-solving, attention to detail, penetration testing, and knowledge of operating system security.

Conclusion

Analytical skills, communication skills, and technical skills are vital to a successful cybersecurity career. Through my time at Old Dominion University and over the years, I have been able to learn, practice, and improve on these skills. I have taken numerous courses to hone my skills to that of an aspiring cybersecurity professional. Through this report and amongst my website I can now prove what I claim. IDS 493 has given me this opportunity and knowledge to be able to do so. Although some classes may be better than others at achieving readiness for the cybersecurity workforce, I can make a case that other disciplines may be just as important in shaping my level of success in any career. From taking these interdisciplinary courses and minoring in Risk Management and Insurance, I can now take on a broader view of solving complex problems. If I can harness the skills put forth in research, then without a doubt I will do well in my cybersecurity career.

References

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