Reflection

By Justin White

Professor Andrews

IDS 493

November 19th, 2025

Introduction

There are many experiences one has that influences their beliefs, opinions, and skills throughout life. This can be something as simple as a conversation with a parent or watching an animation that inspires passion. With that in mind, I will be talking about my journey through life and reflecting on experiences that have shaped my capabilities I have achieved from home projects to my academic career. Throughout my degree program, I encountered a wide range of interdisciplinary courses that combined technology, social sciences, communication, ethics, and business. These courses pushed me to think from different perspectives and helped me understand how multiple fields work together to solve complex problems and how they influence on in daily life. Because the programs were structured around various discipline learning, I was able to build skills that are not limited to a single discipline but instead reflect a broader understanding of how knowledge connects areas of study that constantly change.

As I reflect on my coursework and the assignments I completed, three major skills stand out as central to my growth: Linux System proficiency, Written Communication, and Critical Thinking. These skills were shaped not only by classroom expectations but also by the connections I made between them and the small personal real-world applications of my work. The following sections explore how each skill developed through specific artifacts and how my academic experiences have contributed to my readiness for a future career in cybersecurity.

Linux System Skill Development

One of the most important skills I gained in my cybersecurity program was proficiency in Linux systems, which grew through several hands-on technical assignments. My introduction and first major engagement into cybersecurity occurred with Linux, learning and demonstrating

through a lab on “Basic Linux Commands,” where I inputted commands and provided explanations through captions paired with screenshots proving my understanding. Although the task focused on basic system navigation, this assignment built the foundation for understanding how Linux environments function. The concepts I learned from previous computer science classes helped me learn each command a bit more fluidly due to another system called Unix, but it was the practical hands-on lab that truly improved my confidence in Linux. Many cybersecurity roles list Linux familiarity as essential, and this assignment marked my first step toward meeting that expectation.

My understanding of Linux was further expanded in another lab called “Traffic Tracing and Sniffing,” which is a more advance assignment requiring the use of Kali Linux and Wireshark to capture network traffic between an attacker machine and an Ubuntu system. This lab integrated network theory such as DNS, HTTPS, and ICMP communication with cybersecurity methods. By capturing packets in real time and analyzing their patterns, I learned how to identify the types of activities that occurred during an attack or intrusion. This assignment taught me how to use Wireshark but also showed me slight the perspective of a network analyst, applying interdisciplinary knowledge from networking, cybersecurity theory, and even sociology.

The final artifact is one of my personal favorites being the “Password and Wi-Fi Cracking” assignment which pushed my technical abilities with Linux ever further by introducing me to offensive security tools, including John the Ripper and Cain. This project helped me understand password strength, cryptographic hashing, and the vulnerabilities associated with weak credentials. At the same time, this assignment can be seen as a good introduction into understanding the important ethical responsibility that comes with these offensive tools. Offensive tools are powerful and using them for academic purposes and seeing the potential results that can achieved even by those inexperienced really showed the importance of cybersecurity ethics. The

ideas I learned in the course examining moral theories and responsible digital behavior reinforces interdisciplinary connection within cybersecurity not just about technology, but understanding risks, consequences, and the boundaries that guide all professional practice.

Though these three artifacts are not the only examples that demonstrate how my technical, analytical, and ethical understanding grew over time, they to me are three clear stages of growth. They show how throughout different courses and assignments regarding Linux that interdisciplinary learning supported my ability to use the given tools proficiently, while learning the theories behind them.

Written Communication

Written Communication was another fundamental skill strengthened throughout my academic program. Assignments from multiple courses required me to express ideas clearly, organize arguments, and analyze in an academic perspective. One of the first assignments that significantly developed these skills was the Self-Evaluation essay in my entrepreneurship course. This assignment required me to reflect on how my understanding of entrepreneurship had changed and grown from the beginning of the course through my completion of various discussion boards and papers. Writing about my growth required me to clearly organize my thoughts piece by piece reviewing what I had done and how each assignment impacted me, demonstrating my ability to self-reflect personal insights into academic writing. English composition and social science classes contributed to my skill set needed to complete this assignment effectively.

My Cybersecurity Awareness in the Digital Age PowerPoint further enforced my writing abilities by requiring me to explain cybersecurity concepts through social science lens. The assignment challenged me to research and present statistics, real-world examples, and explanations

of the relationship between human behavior and cybersecurity awareness. This type of assignment is similar to real professional tasks in cybersecurity, where clear writing for presenting information is essential for developing awareness, training employees, or explaining threats to non-technical audiences.

Another major writing assignment that contributed to my written communication skills was the Case Study on "*The Social Dilemma*." In this project, I analyzed the film's themes and connected them to ethical theories such as Utilitarianism and Kantianism. Writing this case study required me to interpret the concerns presented in the documentary, relate them to academic theories, and build a well-supported argument. The interdisciplinary nature of this assignment was combining ethics, technology, and social issues into one coherent thought and perspective which highlights my ability to write thoughtfully and critically about complex topics. This project is but one task that covers the professional writing expectations I could face in my future career where clear oral and written communication is vital. Overall, the written communication artifacts demonstrate how my ability to express ideas, interpret information, and present arguments have grown across various academic courses. These skills are indispensable in cybersecurity, where strong communication is essential for writing reports, documenting incidents, and creating effective awareness materials.

Critical Thinking

Critical thinking was a skill that developed consistently throughout my degree program, particularly through assignments that required research, evaluation, and interdisciplinary analysis. The Business Plan Creation project was one of the most significant examples of this skill. This assignment required me to research business models, analyze competitors, identify a target

audience, and create a strategic plan for potential business. It taught me to consider multiple variables at once which is a key aspect of critical thinking that is essential in cybersecurity, where professionals often evaluate risks, weigh potential outcomes, and choose the best response under uncertain conditions.

My Article Review assignment also showcased critical thinking by forcing me to evaluate a scholarly article on a social science and cyber issue. To complete the task, I had to analyze the article's arguments, assess its methodology, and locate supporting research to strengthen my evaluation. This process helped me understand how to question assumptions, identify biases, and build evidence-based interpretations. These important skills in cybersecurity analysis, where interpreting threat reports and verifying information are essential to making any informed decisions, especially where information is national security.

Lastly, the Global Digital Divide Research assignment had me take a broader and more critical view when examining societal issues through a sociological perspective regarding technological integration. I researched the causes and effects of digital inequality and explored how technological, economic, and cultural factors shape global access to digital resources. By viewing the issue in its entirety, I learned to consider various perspectives of the same problem and evaluate how they intersect. Understanding global disparities is especially relevant in cybersecurity, where international differences in resources and technological infrastructure affect vulnerability and policy decisions.

Conclusion

Reflecting on my academic journey, it is clear that interdisciplinary learning along with various other skills that were gained before these courses were essential in the development of my Linux System proficiency, Written Communication abilities, and Critical Thinking. Courses ranging from technology, ethics, business, and sociology all contributed to shaping a skill set that is better prepared for the dominating field of cybersecurity. The integration of hands-on labs, research projects, written assignments, and ethical analysis taught me to think in broader or narrower view depending on the topic, communicate clearly, and use tools responsibly. These skills may not only be academically valuable but sought after in the cybersecurity field in which I must navigate technical systems, analyze complex issues, and communicate with diverse teams of ranging experience. By approaching my education and skills through an interdisciplinary lens, I feel that I am well-prepared to enter the cybersecurity field and adapt to its constantly evolving challenges.