Reflection Essay: Skills & knowledge gained throughout my academic career

Anna Mae M. Boubacar

Old Dominion University

IDS 493: Electronic Portfolio Project

Dr. Gordon-Phan

June 30, 2026

Introduction

My exposure to technology did not begin as an intentional career direction; instead, it developed organically through my daily life as an adolescent. I spent much of my early years (*ages: six to seventeen*) playing video games on consoles such as the Nintendo 64, GameCube, and Xbox 360, as well as using my purple Dell Inspiron laptop. At the time, these experiences felt like normal entertainment rather than anything connected to a future academic or professional path. Looking back, however, I can see that this consistent interaction with technology quietly built familiarity and comfort with digital systems that would later shape my interests.

Early Interest in Technology & Background

From an early age, I was also exposed to computers and evolving internet systems. I remember using AOL, early versions of Yahoo, and witnessing the gradual development of the internet. Over time, I became familiar with multiple versions of Windows, including Windows XP, Windows 7, Windows 10, and Windows 11. These experiences helped me adapt easily to new interfaces and system changes without realizing I was building technical intuition. Even outside of formal education, technology remained a consistent part of my environment. In high school, I experimented with customizing Tumblr pages, where I adjusted layouts, colors, and structure while also working with basic HTML and CSS. I embedded music players and modified page elements to create personalized designs. At the time, I viewed this as creative expression rather than technical learning, but I now recognize it as my first exposure to how code directly shapes functionality and user experience.

Transition into Academic Interest & Cybersecurity path

As my curiosity developed, I initially considered computer science as a possible major. However, I eventually realized it felt too broad for the specific areas I was most interested in. Cybersecurity stood out as a more focused and structured path, which helped me narrow my academic direction. This decision became more intentional when I began taking courses at Tidewater Community College in 2018. During this period, I became increasingly interested in understanding how systems functioned beyond surface-level use. I also continued exploring related interests such as PC building, Windows customization, and digital design. These experiences reinforced my curiosity and helped bridge my early exposure to more formal technical learning.

Technical Skills Gained at Old Dominion University

Once I transitioned into Old Dominion University, my learning shifted from curiosity to structured skill development. I began to understand cybersecurity as a discipline that requires not only technical knowledge, but also persistence, analytical thinking, and continuous adaptation. One of the most impactful areas of my education was Linux system administration, where I gained hands-on experience with user and group management, file permissions, and command-line navigation. These exercises helped me understand how systems are structured and managed in real environments, requiring precision and intentional decision-making.

Ethical hacking further expanded my technical understanding. Through hands-on labs, I worked with tools such as John the Ripper and Metasploit. John the Ripper demonstrated how password security can be evaluated and strengthened, while Metasploit introduced structured vulnerability testing and exploit analysis in controlled environments. These experiences helped me move beyond theoretical concepts and into applied cybersecurity thinking. In addition,

Windows system administration played a significant role in my development. Working with virtual machines running Windows 7, Windows 10, Windows 11, and Windows Server 2019 allowed me to explore Active Directory, system configuration, and enterprise-level user management. These labs also helped me understand the value of virtualization in safely testing and managing systems without impacting production environments.

Networking & System Understanding

As my coursework progressed, I developed a stronger understanding of networking fundamentals and their importance in cybersecurity. At first, networking concepts were challenging, but over time I began to understand how devices communicate and how data moves across systems. Using Wireshark allowed me to move from theory to observation by analyzing real network traffic. This hands-on experience made abstract concepts like packets, protocols, and data flow significantly clearer. It also reinforced the importance of networking as a foundation for cybersecurity, since understanding system communication is essential for identifying risks and vulnerabilities.

Problem-Solving and Troubleshooting

Another key skill I developed at ODU was problem-solving. Many assignments required troubleshooting technical issues, analyzing system behavior, and identifying root causes of failures rather than simply focusing on surface-level symptoms. Over time, I learned to approach problems in a more structured and methodical way instead of relying on trial and error. This meant slowing down the process, evaluating each step carefully, and considering how different system components were interacting with one another. Breaking problems into smaller, more manageable parts allowed me to isolate issues more effectively and identify where breakdowns were occurring. As a result, I became more confident working through unfamiliar technical

challenges, especially in lab environments where multiple variables could affect system performance. This approach not only improved my technical accuracy but also strengthened my ability to remain patient and persistent when solutions were not immediately clear.

Writing & Communication Challenges

My biggest challenge, however, has been academic and professional writing. Writing at an academic and professional level required me to develop a more structured and analytical approach. At first, adapting to this style of writing was difficult, as organizing ideas, developing arguments, and clearly explaining technical concepts required significant adjustment. Although challenging, this process helped me grow. Over time, I became more comfortable structuring my thoughts and revising my work. My communication skills have improved significantly, and I understand how valuable these skills will be in my professional career, where documenting findings, writing reports, and communicating clearly with both technical and non-technical audiences will be essential.

Time Management & Work Balance

Balancing work and school was another major challenge. This became even more demanding as I transitioned into independent living and moved from part-time to full-time employment with my current company. Managing these responsibilities required discipline, structure, and effective time management. I learned to prioritize tasks, plan ahead, and remain consistent even during periods of high stress. Over time, this experience strengthened my resilience and ability to perform under pressure while maintaining academic and professional commitments.

Personal Growth, Gratitude & Accomplishments

Looking back, I can clearly see the extent of my academic, technical, and personal growth. I am proud of the hands-on experience I gained through Linux labs and cybersecurity tools, as well as the completion of both my associate's and bachelor's degrees. Each stage of my education required persistence and reinforced my ability to achieve long-term goals. I am also proud of advancing professionally and stepping into a management role, which challenged me in new and meaningful ways. Most importantly, I am proud of my ability to remain consistent and committed to my goals even during difficult periods. I am also deeply grateful for the support I received throughout this journey from advisors, professors, supervisors, and loved ones who encouraged and guided me along the way. Their support played a meaningful role in helping me stay focused and confident in my path.

Career Goals & Future Direction

My future career goals include working in help desk and system administration roles within local organizations, with the long-term goal of moving into cybersecurity analysis or ethical hacking within the government sector. I am especially drawn to roles that emphasize hands-on problem-solving and continuous learning. More than anything, I want to continue building on the foundation I developed at Old Dominion University and further develop my skills in real-world environments.

Conclusion

Overall, my time at Old Dominion University has been a defining part of my academic and professional journey. I gained technical expertise in Linux system administration, ethical hacking, Windows Server environments, and networking, while also strengthening my communication, problem-solving, and time management skills. Although I faced challenges in

writing and balancing responsibilities, those experiences ultimately contributed to my growth. Looking back, I am proud of how far I have come and confident in my ability to continue learning, adapting, and growing within the field of cybersecurity and information technology.