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### A Reflective Journey: navigating My Cumulative Experience at Iowa State University

I'm a senior at Iowa State University majoring in Cybersecurity Engineering and expected to graduate in May 2026. I am originally from Omaha, Nebraska and came to Iowa State with very little experience in cybersecurity but have a deep passion for technology and have a passion to help people. Cybersecurity engineering attracted me because it allows me to combine all these interests together. I can protect systems and data to safeguard individuals and organizations. The field is always evolving everyday, this means my days will be different and I will always be learning about new cyber threats and defense systems even after graduating. My decision to attend Iowa State was because both of my grandparents graduated from here and I want to continue their legacy while building my own path here. I was excited and eager to begin my first days of school in college but I quickly realized how fast paced the coursework was when school started up. This showed me how important it is to stay organized and engaged in classes. This reflection paper explores how my academic and extracurricular experiences at Iowa State has helped me grow into a more confident, skilled, and strong cybersecurity engineering student.

My time at Iowa State I have learned many skills that include networking fundamentals, risk analysis, and offensive techniques used by red teams. All of this together gave me a much deeper and more practical hold of cybersecurity. A outstanding problem solving project in CYBE

2310 was to look through a simulated hospital server. I was tasked with finding a required number of vulnerabilities and documenting how each has been exploited and providing recommendations to secure the system. I approached the challenge from applying lecture lessons and previous labs to expose the weak points. I then prioritized fixes based on risk. I am currently taking CPRE 4300 course on networking standards and protocols. This course has deepened my understanding of network security issues. This course teaches us everything about networking. This was very beneficial to me and my future as I will be working a lot with networking. These two courses and projects have taught me to “think like a hacker” which has increased my confidence with my security skills. I once had no idea how to secure a system and now I can identify attacks and design defenses to protect real world infrastructure.

Beyond the technical skills my time at Iowa State has helped me understand the broader societal, global, economic, and environmental contexts of cybersecurity. Courses such as CYBE 2340 taught me how decisions made by security professionals can affect the privacy and safety of individuals, families, and organizations. As well as the course CPRE 4360 over digital forensics focus, we learned laws and regulations of governing evidence collection and data privacy. This gave me a better view of how cybersecurity operates within legal frameworks. We also discussed how security breaches can have severe economic consequences that can be huge financial loss to reputational damage. As well proactive investment in cybersecurity is essential for businesses and governments. These experiences have pushed me to think more deeply about the impact of my work and how I should think more beyond than just the technical skills. Cybersecurity as well influences people’s lives, companies, and even global infrastructure.

Working in IT at the ISU Veterinary Medicine clinic has been one of the most valuable learning experiences of my time at Iowa State. On the job I have applied classroom concepts to

real world projects at work. I learned how active directory and group policies are used to manage users and devices. I have handled everyday troubleshooting that doesn't always appear in lab exercises. The real world IT work has shown me how systems behave at scale and taught me practical skills that you cant fully demonstrate in a classroom. For external resources I have used an online platform called TryhackMe to strengthen and expand my knowledge of cybersecurity skills. The hand on modules helps me revisit fundamentals and explore topics at my own pace. Combining all of this I have accelerated my technical growth and made my classroom learning more actionable.

My experiences at Iowa State has reinforced the importance of lifelong learning in cybersecurity. Threats, technology, and regulations are constantly evolving everyday in our world. I have learned to take responsibility for my own professional development by seeking out new knowledge and practicing skills beyond the classroom. This could be through coursework, my job at the ISU Veterinary Medicine clinic, or external resources like TryHackMe. I have developed habits of adjusting quickly. Looking ahead to graduation and beyond. I plan to continue building my expertise through online resources and work involvement so that I can protect systems more effectively.

Reflecting on my journey at Iowa State I can clearly see how far I have come. I started with almost no cybersecurity experience to today a confident and skilled Cybersecurity Engineering student. I have taken challenging coursework, meaningful projects, real world IT work, and frequent self learning. This all has built both the technical skills and the professional mindset needed to succeed in this field. I as well deepened my understanding of the ethical, societal, and global responsibilities that come with protecting systems and data. I am grateful for

the opportunities Iowa State has provided and excited to continue growing as a cybersecurity professional committed to protecting people and organizations.