

Justin Templeton

23 August 2023

Cumulative Reflection

Upon entering Iowa State University, I found myself with a lot of online classes due to the COVID pandemic. Classes such as Calculus, Chemistry, and Physics were online, which I really struggled with. The struggle with these classes is in contrast to the Computer Engineering core classes, such as Introduction to Computer Engineering and Problem Solving I and II, which were in person and I found great success in. I learned a lot about coding, solving problems, and learning to manage my time and the expectation of others.

I believe that my education really picked up during my Sophomore year, taking my first cyber security focused classes as well as more complex fundamental classes, Cyber Security Fundamentals, Cyber Security Tools, Digital Logic, Data Structures, and Embedded Systems I. These taught me a lot more when it comes to the basics of cybersecurity and its applications, as well as building a strong foundation of computer knowledge that would be tested in the near future. I was able to obtain my first internship at Principal Financial Group. In said internship, I had to use a lot of the concepts I had learned in the cyber security classes here in an analyst role at the company.

For my Junior year, I started by taking Computer Engineering 381, or Computer Organization and Assembly Level Programming. 381 is known to be one of the most challenging classes for Iowa State Computer Engineering students as it takes a significant amount of time. I really enjoyed this class as I was able to design my own processor and work in a group of two in

order to accomplish the goal. I spent an honestly obnoxious amount of time on this classes projects, but I am very proud of what I have accomplished. I also took cryptography and introduction to digital forensics during this semester, which further extended my knowledge in cybersecurity and its intricacies and applications in the real world. I then worked my second internship at Principal Financial Group, in which I worked on the Cyber Defense Engineering team, setting up SIEM rules and designing the security architecture for the company - making me the first intern this team has ever had. I also won a coding competition called the Intern Code Jam during this time by making a beautiful website for teaching young adults how to save their money wisely.

Now into my senior year, I am broadening my knowledge of cybersecurity by taking the more advanced Computer Forensics course to expand my experience from my first internship into more in-depth and longer cases, specifically where legal aspects are involved. I am also taking Report and Proposal Writing to expand my writing abilities to be better at professional writing. I plan on taking Reverse Engineering of malware as well to gain some more experience in malware and threat analysis, which I started digging into a little bit during my second internship, but would like to learn more about. I am also going to take Operating System Security to dive deeper into security concepts that affect the boundary layer between silicon and software. I want to be able to explore security from assembly code to Java classes and all layers in-between, and Iowa State has done a great job to get me to this point where I am capable of being both competent now and a life-long learner in the future.