

Katie Wolf

March 15, 2024

A Reflective Journey: Navigating Your Cumulative Experience at Iowa State University

I started my time at Iowa State University in the midst of 2020, an unprecedented time when COVID-19 had left everyone in masks and mainly at home. During the fall of 2020, my first semester of freshman year, all my classes were online except for one in-person 8 AM lecture. At the time, I felt wholly unprepared for college. Without a high school graduation or the entire last two months of 12th grade, it was hard to convince myself I was actually starting a new chapter in life. Despite all this, I kept an open mind, and now I can say I've grown in ways I never imagined possible.

I decided to major in Computer Engineering for two simple reasons: I wanted to be an engineer, and computers were cool. I knew very little about what it entailed or the different areas within the field. Despite not knowing what I was getting myself into, Iowa State's Computer Engineering program has helped me gain both the skills and passion for my future career. From software development to hardware design, I have officially learned what Computer Engineering encompasses and how to succeed as an engineer. The coursework has been challenging but rewarding, and it has equipped me with fundamental skills and knowledge that I have already used in internships and will continue to develop upon graduation.

One of my significant experiences from the past four years is taking the course CPRE 381, or Computer Organization and Assembly Level Programming. Despite every student claiming it's the most difficult required course in the Computer Engineering curriculum, it soon became my new favorite class. I really liked learning how computers actually worked, and although I pulled several all-nighters working on the lab projects, I enjoyed facing the challenge of designing and implementing a MIPS processor in VHDL. After finishing the course, I was offered the chance to be a teaching assistant for that same class, and I knew I couldn't turn down the opportunity. I have now been a TA for CPRE 381 for two semesters. Through teaching and helping students, I have gained valuable communication and leadership skills, as well as an even deeper understanding of the class's content. Currently, I am taking CPRE 488, Embedded Systems Design, and so far, it has been a similar experience to CPRE 381. The class is often hailed as the most challenging and time-consuming elective, and I had heard the labs were very

hard but fun. While I was skeptical of how a lab could be both, I can now agree. Through these two courses, I have discovered an interest in low-level development, a field that combines software and hardware. With additional internship experience in software engineering, I have gained exposure to some of the most prominent fields within Computer Engineering.

In addition to my major, I got into the habit of picking up minors. In the span of three years, I added minors in Cybersecurity, Mathematics, and Chinese to my studies. I pride myself on my curiosity, and I knew I didn't want to limit myself while in college. Before even starting college, I knew I wanted to minor in Chinese. I had taken Chinese as my foreign language in high school and wanted to continue my studies in college. After freshman year, I added the other two minors. Cybersecurity is crucial for computer systems, and since technology intersects with nearly every aspect of our lives, I wanted to educate myself on the field. Meanwhile, math has been my favorite subject for as long as I can remember, and after finishing all the required math courses, I knew I would miss the subject if I didn't take more classes. Through each of these minors, I have diversified my worldview and developed a deeper level of analytical thinking. While taking on three minors has made each semester's credit load higher than average, I've never regretted the additional education.

From the countless hours I have spent in Coover Hall to the amazing friends, mentors, and professors I've met, I am thankful for my journey at Iowa State and all it has offered me. Four years ago, I was unsure of where I was headed. Now, I am confident in the path I have chosen. While I still have so much to learn, I have the foundation to pursue my goals, and I am excited to see where life will take me after graduation.