## Cumulative Reflection

I transferred to lowa State in my sophomore year to be a computer engineer. After a year at community college, I instantly knew this was going to be a completely different and entirely more involved experience than what I was used to. But I was excited to start learning about computers and start programming. Unfortunately taking Cpre 185 told me that I had a lot to learn about how to think like an engineer to do problem-solving something that had not quite clicked until the next semester taking Com s 227. Where I began to really think as an engineer does. This class is where I really started to crave finding challenging problems that really wracked my brain to think outside the box to find the best solution.

As a senior, I look back at all the classes that really made a huge leap in my understanding. One of my favorites and probably many people's was Cpre 288 or Embedded systems. I took the class in the summer and spend way too many hours on slowly building the many systems to create a "mars rover" from our modified Roombas. I loved it, reading the Technical descriptions then building a program. Collaborating with my fellow teammates and TA's to problem solve all of the issues we had in the program. This is where I truly felt that I was in the right field for the first time. Navigating our rover to the goal than playing the victory music once we knew were there made that feeling even stronger.

In my last couple of years of classes, I now get to prove what I have learned and prove my ability to learn more. With classes like Com s 308, I was involved in a semester-long struggle to develop an app with three other students. We had to use all of our abilities in time management and communication skills to succeed with each other. Trusting in others' abilities was something I had to do more and more on as class moved on, something that has become extremely useful in working with other teams. It was with these later classes that stranger in the classroom became close friends of my mine and we all became a sort of collective engineering family.

In trying to further my learning and work experience I took up an undergraduate research position with Dr. Guan after taking a class with him. This is where I have been able to further my programming experience with a great deal. Learning about backend programming and making web crawlers, something that I have had little experience with in the past. Beyond this, it has given me the ability to be a big part of a greater project that affects many people and seeing this has only increased its important to me. Going to meetings and really fighting my case to people on how we should proceed has made

me more confident than ever in my engineering abilities something that I had to work on a great amount at my time here at ISU.

As my time here as an undergrad comes to a close here at Iowa State. I look back at my early years and see all the mistakes that I made and what I could have changed if only I had known my future. But all of those mistakes and learning from then has gotten me to where I am now, where the future looks very exciting. Though it seems like a lifetime ago starting at ISU I'm excited for my future and what it holds. I look forward to all the learning I will have and connection I will build to further myself as an engineer.