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Cumulative Reflection

Over the course of my time studying Computer Engineering at Iowa State University, I feel like I have greatly grown as an individual, as well as further developed my professional skills. I have taken a variety of courses, both in my major and outside of my major, that have definitely prepared me for my future as an engineer. As my adventure here comes to a close, it is good to look back and reflect on all of my experiences thus far.

I believe that Iowa State University has prepared me to design systems or processes going all the way back to freshman year. I have had courses such as CprE281, CprE288, or ComS309, where there was a focus on developing a plan for projects before actually initiating them. By taking time to develop ideas and solutions for a problem, I was able to better face the problem head on, rather than beginning it blindly. This has also helped me to solve contemporary engineering problems, where there has been a focus on looking at the bigger picture and from multiple perspectives. If I had tunnel vision and only considered my previous experiences, I would have failed. But by discussing with others and seeing everybody's points of view, I was able to better solve problems. Additionally, this has helped me to understand both professional and ethical problems. In courses such as CprE394, there was a focus on ethics, and we frequently had discussions regarding some real-world cases where ethics may play a role in the outcome. By learning how to do this as a student, I believe it will help me to take a step back and analyze the problem more effectively as a full-time engineer.

Additionally, with in-class projects as well as tasks where there were problems to solve, I learned how to more effectively work as a team member. Looking back, another change I have noticed is changing my wording from group to *team*. I feel that this is important because by working as a team, things get done more effectively, rather than as a group, which seems more chaotic. I was able to utilize a variety of resources during my time as a student, including resources from the library, some Iowa State faculty, and other students in my field. By drawing information from a variety of locations, I was able to learn things more effectively, and potentially figure out problems that I may not have solved otherwise. Additionally, by working together with other students on various projects, I was able to cement my understanding of valuable course information. When someone would get stuck, someone with a solution was able to guide us in the right direction, and help us to understand a topic. Additionally, when I had the knowledge of how to solve a problem that others may be stuck with, by teaching them what to do, I reinforced the knowledge that I already had, and it stuck deeper. By some of the various approaches to learning that I have found during my time at Iowa State University, I feel that I am able to communicate more effectively, solve more challenging problems, and achieve more than I was capable of doing in the past.

To conclude, by living day to day, it is easy to feel like not much has changed in the past few years. However, by looking back on my years at Iowa State University, I am able to see immense, valuable changes in myself both as an individual in the world and as an individual in the workplace. I am now capable of solving more complex problems, thinking from multiple perspectives, stepping back from problems to analyze the whole situation, and thinking outside of the box to discover how to complete things. Additionally, by keeping ethics in mind when

attempting problems, I believe that I am capable of discovering solutions that are good for everyone involved, without violating personal values or creating unintentional ethical issues. I am grateful for my adventure at Iowa State University, and I am looking forward to many more adventures that the future may bring thanks to the valuable learning opportunities I have received.