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Cumulative Reflection

Iowa State has prepared me well for many parts of software engineering. They have taught me to design systems with a few of my classes. Specifically, my software design class helped me to visualize a project from start to beginning. It also gave me the experience to deal with important software artifacts such as UML diagrams, technical and functional requirements, and plenty other of processes. They have also taught me to formulate and solve engineering problems by making us use resources and figure them out for ourselves. Our math classes, countless programming assignments, and other tasks have helped me to think more logically. A perfect example of this is my algorithms class, which helped me to think about efficiency and cleanness when I write code. There are also other classes such as my general electives that help me understand software in a global and societal context. These classes have showed me world problems, and I could think to myself how these problems could be solved. A handful of classes have helped me to understand the ethical implications of engineering decisions. My senior design class has helped me to understand what considerations you must have when making software for the public. In making an application that has the potential for many clients, we must make ethical decisions.

My class work has also prepared me well for working in groups. I have had countless projects and assignments that had many members. We created development processes, mastered form of communication, and worked on problem solving as a group. We also planned issues together, divided tasks, and were understanding and helpful when necessary. There are also contemporary issues that Iowa State has helped me realize. In a number of classes, we discusses how much software evolves and that what we will be using today will probably be useless in 10 years. That is why they have given us the skills to problem solve, and we can evolve to whatever technologies we need. There are many ethical responsibilities I have been taught as well. We have been shows unethical examples in the field, have been told why they are wrong, and have had countless exercises in discussing ethics with software.

In my projects and problem solving tasks, I have drawn from countless resources outside of class. The most common is the community that posts on forums such as Stack Overflow. There are many people in our community of developers, and many problems have already been solved. I have also read through tons of documentation for technologies that I have used to help me solve problems. For example, I have come to know React pretty well, and I would not be where I am without the documentation for this library. Not only this, but I have read plenty of articles, such a Medium blogs, from people with experience in the field about many different topics.

Lifelong learning is key to this field, and there are things outside of class that have helped me realize this. The Hack ISU events I have participated in during my years here have helped me see how quickly technology can change. It seems that every year I see a group using something I have never heard of. There are also other groups such as the Computer Science Club that has helped me see just how much is out there to learn. Every week they touch on a different topic, and most of the time it seems like it peaks my interest but I do not have the time to dive into it. This just shows that there will always be something new that I can learn, and that this field will always have problems to be solved.

In the last few years, I have taken plenty of opportunities to learn new skills so I can attempt to solve new problems. One example is learning React Native, in my freetime I built a small React Native application by myself so I could solve problems with mobile development. I always wanted to be able to make mobile applications, and now I have the capability. I also wanted to get an understanding of game development. I decided to attend some meeting with the game development club, and now I have a much better understanding of the tools that are used in this process. It is always good to use your free time to expand your knowledge and craft your skills.

If I were to do my undergraduate work again, there would probably be a few changes I would make. One, I would take better advantage of office hours. When I did participate in these meeting times, I almost always had a better understanding of what was being taught. Not only that, but the professors have plenty of experience professionally and are willing to help you with your career. Another decision I would make is possibly taking a few different classes. I have definitely learned from all of my classes, but there are some very interesting sounding elective classes that peak my interest. For example, there is a principles of artificial intelligence class that sounds super interesting and would be awesome since this will be so influential to the future of our society.