

## Personal Reflection

Graduate school at the University of Montana has been an amazing experience. I've had the pleasure of working with, and learning from many talented faculty members and students, whom I've developed deep intellectual connections with. It's hard to believe that nearly six years ago I took the first computer science course of my life in a small classroom with Michael Cassens. Little did I know that I'd go on to develop such a strong passion for computing.

My first semester of graduate school, I was given the opportunity to co-teach a Mobile Computer Science Principles course with fellow graduate, and undergraduate students at Corvallis High School. This experience taught me many things that will stick with me for the rest of my life. One very important lesson that I learned during this experience was how to work effectively with a diverse group of people (the students and my colleagues) to challenge each other, grow, and learn new things every day. The experience forced me to reflect on what it was that made me passionate about computing and helped me to utilize this passion in my teaching, coursework, and everyday life.

Fall semester 2018 I learned more about client-side web programming, and built an educational game using the skills I had learned throughout the semester. I learned about data visualizations, and how to effectively represent data, discover trends, and gain insights into big data. I got a taste of computational biology, and how it was revolutionizing the fields of genomics, and medicine. I left this semester feeling excited about what I had learned, and even more hungry for what was ahead. That same semester I was given the opportunity to serve as the inaugural tutor for the computer science study jam program. That semester I began working with undergraduate students in our department and wanted to help them be successful in our program.

In the spring of 2019, I worked as a teaching assistant for a visiting professor from Washington. This experience taught me about working remotely, and how to communicate effectively with my colleges even in a remote setting. At the same time, I took the course he was teaching, and learned about how to design secure databases, control access to them, and implement the various security policies that we had learned about all semester. I programmed object detection algorithms, structure from motion, and neural style transfer in Python, all the time working collaboratively with my classmates. I took the most challenging class by far I had ever taken and spent a third of my class time in the math department. I learned about extremal graph theory and reinforced the mathematics background that I had pursued as an undergrad.

Fall of 2019 I assisted Travis Wheeler with the data structures and algorithms course. I taught labs and was able to solidify my knowledge of the essential data structures and algorithms that I was already accustomed to using every day. I learned about machine learning, including neural networks, naive Bayes classifiers, hidden Markov models, and much more. I felt like I was getting substantially better at programming every day, and craved learning new things. I took a cyber security class in which I gained a more in depth understanding of how computers work and began to understand on a deeper level how computing was changing the world, and the implications that this has on everyday life.

In my last semester of graduate school, I worked with Yolanda Reimer to assist in teaching Database Design. I had the opportunity to give lectures, as well as work closely with students in the class. I took a digital entrepreneurship class in which myself and a group of students implemented a minimum viable product for a completely new startup company that we designed. I learned about a user centered design methodology for designing user interfaces, as well as immersing myself in the literature of the field. I wrote classifiers for diagnosing autism, as well as solving real world medical problems. I wrote my own programming language and learned about the field of Natural Language Processing. I learned how to overcome the challenge of remote learning together with my peers.

In conclusion, over the past two years I've developed a love for teaching, and come to know the intriguing, challenging, and impactful problems that an education in computing will empower me to solve. I'm eager and excited to utilize the skills that I've gained, and to make a difference in the lives of those I will have the pleasure of working with in the future.