Summer Internship Report 2017

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Hometown: Middleburg, Florida

Virtual Reality Research:
Case Organic at MIT/Harvard
Boston, Massachusetts & Portland, Oregon

Provide an overview of the organization/research project and a summary of your responsibilities, tasks, and/or projects.

This summer, I worked with Amber Case, a researcher at MIT Media Lab for Civic Media and Harvard’s Berkman Klein Center where we researched virtual reality. With her mentorship, I began conducting virtual reality (VR) research in topics such as industry, academics, art, and entertainment. Through her guidance, we co-authored a paper detailing the user experience (UX) techniques used in the current applications. This paper is a summary and exploration of the user experience of virtual reality. It seeks to provide a short overview of current applications and user experience for the HTC Vive, currently the most advanced and mature headsets for Virtual Reality. We explored the industries that will be impacted by VR, why virtual user experience is so revolutionary and what embodied computing means. Finally, we covered potential futures of the industry, such as constraints and opportunities in both Virtual and Augmented Reality.

Through Amber’s affiliation with Harvard’s Berkman Klein Center, I worked with other interns on the legislative implications of virtual reality & augmented reality technology. I experienced tech from a non-tech background, seeing as most interns were preparing for a career in law.

Finally, in Portland, Oregon, I was mentored by a VR developer, Stephanie Mendoza, who works with Portland Immersive Media Group and a VR art group called XChurch.

During your internship, what did you accomplish or how did you make a difference? In what ways did you grow in your professional and technical skills?

During this summer, the wisdom I gained became my most valued accomplishment. In addition to the wisdom I gained, I also accomplished tangible tasks such as co-authoring a paper, which will be in submission to be published in the MIT journal; working with a group of exceptional interns to
understand the future legislative practices with AR/VR; was offered two jobs by tech companies in the first two weeks of my internship; gave a presentation at Harvard; created a personal website mockup for Harvard’s Berkman Klein community; worked with developers at Portland Immersive media group & Xchurch; and helped build an online community in a VR application called Anyland.

I was able to ask questions of very intelligent people, and they gave me their time. Amber introduced me to Mary Gray, Joy Buolamwini, Nathan Matias, Samuel Klein and Kyle Drake whom are all internet celebrities, but for the right reasons. They use technology to help people in their own ways. This is what I want to do. My life vision is to use technology to help people. This wonderful group of people, including Amber, gave ideas, countered my questions with other questions, and most importantly motivated me to continue my path. This is how I grew this summer: yes, I learned and developed programming skills, technical skills, and improved on my networking skills and public speaking skills, but most importantly I grew as an individual and professional.

The professional development Amber gave to me was also invaluable. Her incredibly busy schedule was halted when I didn’t understand something or when I said, “Wait, can you dumb it down a bit?” She gave me her time and poured her fountain of knowledge on me. She made sure I understood that working in a lab for hours is not the best way to do things and that it’s better to go outside and talk to people and get ideas. She also taught me to constantly work. By this I mean connecting work to everyday life. So, for example, I did research on virtual reality and being in another world/reality. When I brushed my teeth, I thought about how it would be different brushing it in VR upside, down, sideways or on top of Mount Everest. I learned to see things from different perspectives and then come back to writing the paper and incorporating them. That’s how I would do it, that what she taught me.

Describe a problem that you helped to solve at your internship. What skills or knowledge from your education at Sewanee helped you address the problem?

Fluidity. Sewanee does a great job with teaching you how to write, think differently, and give presentations, but I think where I benefited the most this summer was learning to be fluid and adaptable.

What I learned at Sewanee was to be an octopus. By that, I mean I learned to be adaptable to different environments and to thrive in those environments. Octopi cannot only change their skin to match the terrain, but also change the shape of their body to its advantages.

The obstacles I dealt with this summer were focused on communication. One obstacle I faced was explaining to people what it was Amber and I were researching. This is when being an octopus came in handy because we met with tech industry people, tech education people, and tech art people. In dealing with all these people, you must speak a language they understand and put it in a way that they will be able to understand and grasp.

In what way were your teamwork skills strengthened?

Lawyers. Working at the Berkman Klein Center with lawyers and people studying law, I learned to think of problems from a legislative point of view. In return, I led them to understand problems from a technological point of view. My team skills were strengthened when one of my team members said, “I don’t see the importance of virtual reality- can there actually be real-world applications to this technology?” This question was posed to me as an egotistical question. It was obvious to me and my teammates that I was being belittled. At that time, I saw two ways to remedy the situation. I could
either explain that there are real-world applications already, and disprove the claim, or I could invite my team, along with the other interns, to the lab space to help them understand and experience VR in a more constructive, applicable fashion.

I learned the art of de-escalation. Learning to navigate qualities in people such as egos and perhaps the fragility of those egos helped me communicate my ideas in ways that were compatible and sat well with others. This increased my success in contributing to a healthy, respectful team dynamic that also allowed us to discuss ideas productively rather than get stuck in cycles of protecting egos. Perhaps even dismantling them and their importance in our work to shift focus and better look at our actual work.

**How did your internship affect your career plans?**

Exponential Growth.

The trajectory of where I was headed to where I am headed now has grown exponentially. Most importantly, I believe that I am confident in my abilities to work with highly-intelligent people and contribute to the conversation. This only propels me further into plans for my career and pushes me to go farther than I may have previously thought I could go. Honestly, I was nervous to be working with researchers at MIT/Harvard. At first it was intimidating. As I traveled up to Boston, I kept asking myself if I was good enough... again, and again. I was. I’m confident in that now. I think confidence helps, but also putting Harvard and MIT on my resume helps, too.

**In what ways did your internship cause you to encounter people of different backgrounds from your own? What steps did you take to communicate effectively with such persons? What did you learn from such persons’ perspectives?**

Living in Boston and traveling to Portland, Oregon, this summer gave me great insight to a different perspective. For example, I was exposed to many transexual perspectives and using pronouns. A fellow intern who was born a male preferred to use pronouns such as she, her, and hers. I tried my best to practice inclusivity and will admit that I messed up at times, but what I realized from talking with her is that admitting that I made a mistake is better than not acknowledging that mistake.

**Words of advice for future interns (housing, transportation, etc.)?**

Housing is expensive. Ask students who are in college in that area for rent advice.

**Words of thanks to your internship funding donors:**

Donors- I hope you know how invaluable this experience was. Although I am only a student and will be a graduate student for a few years, you have inspired me to give back just how you gave to me.

A few other recent graduates and I are working on a small scholarship to also give back to Sewance.