

Final Reflections on My 2022 Enrichment Experience at the MIT BeaverWorks Summer Institute

By Elaina Xiao

My final week at BWSI Assistive Technology has come to an end. These past four weeks have been incredibly challenging, intriguing, and lively. Being on Zoom for my third summer in a row, I was worried that the course would be repetitive of my past experiences. However, I was sorely mistaken as soon as I joined the class for the first day. BeaverWorks prioritizes hands-on learning far more than even my classes at a rigorous STEM school. In addition to being free, BWSI sent us many packages so we could continue learning in an interactive setting. The Mystery Box of Awesome contained supplies I was able to use for my final project, such as a box cutter, hot glue gun, duct tape, and a caliper. I was taught how to use these tools and so many more such as 3-D printers, modeling, and how it all relates to assistive technology.

I've learned the importance of documentation to ensure others will be able to recreate your work through an activity. To not "get sued," learning to add details to your sketches helped our partners recreate our design. We practiced how to present without filler words, and if "um" or "uh" was said, our classmates would say, "MOOOOO" as we were presenting. My speech and debate experience helped me be one of the few to not say a filler word, but what I learned in class still stuck with me as I remembered to collect my thoughts each time the slide changed.

Although most of my peers are from the West or East coast, I was one of the few in the Central time zone. I was intimidated at first since there are no MakerSpaces or 3-D printers near me

compared to others, but in the end, my project only needed a small alteration to create a big change. For my mom, who was my co-designer for the past month, I created a device for her to put socks on without having to bend over as my final project. I altered an existing model on the market and added bendable plastic at the front so her smaller socks could fit on the device. After four trials with the original device and my own, the Slip'n Sock, the time went from 34.67 seconds to 10.33 seconds on average. This final project was intimidating to start since I have limited experience with assistive devices, but I learned that I don't always have to reinvent the wheel when trying to create change.

Finally, I've gained connections to peers around the country and even in other countries as well. Through group projects, design sprints, PowerPoint Karaoke, and cheering on our peers, I feel comfortable with a group of 27 other students. Even the various TAs and my instructor, Hosea Siu, have made the environment fun and welcoming. During breaks, we often hear music playing from the Zoom. I will miss hearing the Avatar theme song or Mario Kart music as I take breaks from my computer. The staff also made time to answer questions about college, high school, and their experience working with us. They tried to make this a course about us by making the schedule fit our needs with our final project. They even got a robot that we could control from Zoom to explore Lincoln Lab through a scavenger hunt!

During the final event, I was able to present my final project and my hopes for the future. This course has inspired me to look at assistive technology in my community and how it could be improved. As they played a video about why we chose to attend BWSI, a clip I recorded popped up to a crowd of nearly 400 people. It was bittersweet to be reminded of my views before I

started the camp to now. I was nervous, excited, and ready to learn a new skill. I didn't realize I would gain so much in the process.

My experience with BeaverWorks Summer Institute has become invaluable. I thought four weeks would feel incredibly long, but I feel like the past month has flown by. I am so grateful for the Garwin Family Foundation for supporting me through this program. As my senior year is about to begin, I know I will be ready to handle tough building projects, collaborate with new faces, and accept assistance from others throughout the year.