

## Mac Trip (Capstone Expo) Reflection

The day that we went to see all the senior engineering capstone projects was really cool! I think it was awesome to see the creativity of all the students and what they designed and came up with in their fourth year in the program. Since I want to go into the field of engineering and going to university (maybe at Mac) for an engineering program, it was interesting to see what I might also be able to accomplish in a few years. I was surprised at the complexity of some of their projects (like the car you could move with your eyes or the table that follows wherever you go) and I remember thinking “how am I ever going to be able to do something like this??” One of the students seemed to read my thoughts and said, “don't worry, when it's your time to do this after going through the engineering course like we did, you'll be ready,” and hopefully he was right. It kind of scared me. The thought of having to do a big project (with no ideas at the moment) made me a little concerned but I'm sure everything will be fine once I get to that point.

I learned from the students that you are going to have to work with people to get things done and that there may be some problems along the way, but as long as you communicate with those people in an effective way, you can overcome even the toughest of challenges. There was a group that made a robot that sorted recycling by looking at it and recognizing where that substance would go. However, this required the ability to program the robot and they only had one person in the group who could code, so they faced some challenges with that. They also had to build a rotating plate so the robot to spin the sorted items into their correct places and instead of buying a spinning plate, they ran out of time to order it and had to end up building their own design. They also found the building of the machine to be a challenge as they said “none of them were mechanical engineers” so they found it difficult to build an essential part of their design. So, they needed to know the technical skills of how to code and build their design, but they also needed the “soft skills” of working hard to overcome these challenges together and they needed better time management as they said if they could go back to the beginning and do it all over again. However, despite these challenges, they did end up with a good finished product and they presented their idea very well, showing that they did have good “soft skills” when they did this project as they worked well together. The questions you gave us to ask allowed the groups to really share the actual experience of what they went through to build their projects, not just share the technical side of what they accomplished.

Imagine that you are in your final year, presenting on your final project. What are some actions that you can take now, and in your first year of university to make sure that you lay the foundations to deliver a top-quality, professional final year project?

To prepare for my final project, I can start thinking of ideas that might be interesting to do for the project now, as well as work on some skills that would allow me to be successful in the future. An example of this is to maybe take the time to learn coding in the summer as most people at the Expo used some form of code in their project. Now that may be because we were looking at software/electrical engineering but I still think it is something that engineering students have to learn in their first year anyway, so it would be helpful for me to learn it to get more comfortable with the programming language. I could also work on some “soft skills” like how to present ideas better and how to work in groups well with others. These are some things that I can do to lay the foundations of a top-quality professional final year project.