

Upon finishing an internship on hyperspectral imaging and arduino at Science Centre Singapore, I reflected on my experience, expertise, and skills learnt there. It was a unique experience for me, to come together with people my age, and not only collaborate on an extremely interesting project, but also learn new skills along the way. We certainly came across a few challenges, like trying to figure out how exactly to build a viable basic spectrometer, but it was wonderful seeing how the theoretical skills we learnt in math and physics actually applied to the real world. My knowledge of reflection and refraction calculations were put to use outside a test paper to build a spectrometer that would refract light like we wanted, my geometry skills were put to use to sketch out a proper building plan so it wouldn't topple but would be easy to assemble. I particularly enjoyed designing and building the spectrometer, and was shocked to see how absorbed I was when designing and drawing it on fusion 360. I also learnt how to operate a laser cutter in order to cut the acrylic into our desired shapes for the spectrometer. While the technical skills were easy enough to learn and master because of our previous experience and interest, there were other areas that were harder to manage. My team consisted of 3 people, and we were all very different people. While it made for a more varied group, it also made for more clashes between working style and mindset. We also often had difficulties approaching a certain task where the expertise required was at a high level, like some of the coding required for the spectrometer. So, we had to deal with different communication styles: one person needed constant check ins and more group discussions, while the other was much more suited to one check in at the start of the day, and being left to work on their tasks alone. I found I required an adequate amount of time alone to work on things and figure them out on my own, but I did find periodic in-group check ins more useful. It allowed for us to ask any questions we had, and check on each other. Seeing how much work other people did in the same time frames also helped to keep me on track so I wouldn't feel like my contribution was lagging behind. While there wasn't a lack of conflict, I'd say that working in a small group with completely unfamiliar, different people certainly boosted my communication skills. Usually, these people would be from the same school, same grade, or I'd know about them somehow, so while they'd be unfamiliar on a personal and managerial level, the both of us had some iota of information about the other. On the other hand, we were all from different schools, interested in different things (other than our internship), and were used to different styles and methods of work. Despite that, we managed to make substantial progress despite the unexpectedly high level of coding and electrical expertise required - I also got to apply my arduino knowledge from my last internship, which was very fun. Although the circuit I built was much too simple for our project due to the level of work and small time frame, I was still happy I got to consult our mentor and work with him about the circuit - it was different from coding because we all had previous experience, and it's easier to get coding help. For the arduino however, I was mostly on my own-our task was so specific you needed your own knowledge to fuel it.

So I enjoyed speaking with my mentor and having him teach me some additional things about it. I was also extremely happy that I had a friend in the workplace- we'd been friends for a long time, so it was much easier for me to take a break, pop down to have a chat with her, and come back feeling refreshed, and although I enjoyed my work, the experience wouldn't have been as enjoyable without being able to take the opportunity to explore science centre and its wonderful exhibits without her around. We both also ended up making a new friend who was in her project group- and we are still in touch today, and (try to) regularly update her on our life happenings. Overall, it was a very pleasant experience that I am glad was productive, fun, and insightful enough for me to miss it just after it ended, and my friends and I plan to visit again in December!