

インターンシップ体験記 (海外インターンシップの場合は英語で記入)

I did my overseas internship remotely in Japan because the internship period was under COVID-19 disaster. I am going to write about my experience of the remote internship in great part.

• Lessons learned and problems faced while preparing for the internship

I have planned to do the internship work at UC Berkeley after a short visit last year using HWIP travel support. At that time, I gave a talk about my PhD project works to Prof. Weiner, the supervisor of the current internship. He gave me valuable comments and introduced me to his fascinating research projects. Since then, I had been wanting to do internship work with him. He has so many projects and he kindly invited me to do one of his projects. I found it was important to inform the internship supervisor of what I have been working on and my research interest face-to-face (if possible) before starting internship.

• Purpose of internship and knowledge gained through the internship experience

The purpose for me was to do a different kind of research which I have not yet worked on. Through the internship, I could analyze data which is difficult to obtain in my current research environment but I have been interested in. My task was processing the data. To do the task, I used novel techniques, which has been developed by the project members. The member kindly lectured me regarding how to use tools for the analysis. It took me relatively long time to master how to use, but I could efficiently use the tools in the end. This experience was very useful for me to expand my study method. Because I could do a work which was in line with the purpose, I am really satisfied with it.

• What you learned and realized through the internship concerning communications with colleagues, supervisors and/or academic staff

Since I did internship work remotely in Japan, it was unlucky that I could not have a chance to talk and go to lunch with students and other academic staffs. But, it was not so much of a pity because I could have a chat with lab members when I visited the lab last year. Also, in terms of moving forward with the work, it was relatively little stress. I could have meetings with Prof Weiner and other members on Skype. When I had questions, they thankfully made time and helped me. The one disadvantage was time difference. I usually have a skype at around 7:30 AM because the time is different more than half a day. I think it can be possible to do internship research remotely, unless the internship work you have planned is just only a wet study. But I hope HWIP members who will do internship next year can study overseas.

• Improvements you made and goals you failed to achieve, and how you will use the experience for your future career

In terms of improvement, I was able to perform novel, collaborative research. I kept in mind to inform members of updates even if the project is not going well. We discussed issues of analysis procedures and fixed program codes. It was a fruitful experience to perform collaborative research. During internship work, I heavily used program codes which have been developed by members and then performed subsequent analyses. It became easier for me to understand program codes that other researchers wrote. Also, I could contribute improvements to the code, which was gratifying for me.

インターンシップ体験記 (続き)

This internship is finished, but we are going to continue the project. This internship was important for me to move forward the current collaborative research project.

The main goal I was unable to achieve was that I was unable to live in Berkeley. I wanted to have an experience finding a hostel because I want to work as a postdoc researcher at UC Berkeley after graduation. I also wanted to know the daily life of PhD student at UC Berkeley. I imagine it would have stimulated my research attitude in a positive direction. Nevertheless, I did not have a chance due to the current circumstance of COVID-19.

• **What you learned from working in academia or industry outside of the laboratory (advantages and difficulties)**

This internship was a first experience for me to do a collaborative research with an overseas lab. The advantage I found was doing a new project with new members. The research target was different from my PhD works, so it was exciting. I could learn the usage of new tools which may also be useful for evolving my PhD work. The difficulties I felt were the length of period. Three months are not enough for me to complete a project. It took me long time to learn how to process data and use the tools. Though, perhaps it would have been more efficient if I would have been able to work on site.

• **What you discovered about daily living in the country of the host organization, such as lodging, meals, safety, commodity prices and weekend activities**

I could not do internship on site, but I had a week visit for UC Berkeley last year. I wrote about the experience instead. I visited in winter but, the weather was not so cold compared to Japan. However, I found the living cost is so expensive in Berkeley when looking for some hostels. Considering the budget of HWIP internship program, even though the aid may be good enough for other areas, it may be likely that two months are maximum limit to stay in Berkeley. I recommend obtaining other grants for studying overseas. For example, JSPS programs are useful.

• **Other lessons learned from the internship that you think important (e.g. how positive involvement in internship activities helped you grow as a doctoral student)**

The internship work was a big collaborative research. The research was a joint work with Berkeley and other university. I found a collaboration can rise a new research which has a scientific value. The point I found was we can do collaborative research using some remote system. Thus, if I would like to set-up a novel collaboration in the future with some labs that are far from Japan, I learned that this is possible to do remotely. I have already understood the importance of an integrated study though HWIP classes, but I learned the importance of this again through this collaboration.