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）

What I learned during preparation for internship

For the preparation of the internship, I surveyed the research that the host supervisor had conducted, and created environments for machine learning techniques and their evaluation used during the internship. In the survey, I read papers focusing on how machine learning methods were applied to natural language processing, and how these technologies correspond to language processing in the human brain. As for machine learning, I also studied its fundamentals with related papers. On the other hand, I did not have enough knowledge about brain science, so I had a little difficulty to read about the descriptions of brain functions. It was also necessary to acquire knowledge about such different fields at the same time.

Purpose and got knowledge in the internship, how to proceed with research

The purpose of this internship was to learn state-of-the-art machine learning technologies for natural language processing and to apply them to human-robot interaction. To achieve them, I discussed how to proceed to these research topics with the supervisor before the internship by email. This process also included preparing environments for using machine learning technologies and methods to evaluate them. These were very useful to start the internship activity smoothly. During the internship, I did two themes in parallel, and they had something common. So I was able to proceed effectively. I had a lot of discussions with the supervisor and lab members about the method and design of the experiment, so I was able to proceed speedily.

What I learned about communication

The supervisor in the internship is from the USA, so we talked in English. I was not confident with my English ability, but we can communicate in English thanks to his help. For my effort, I took notes and wrote memos regarding the research ideas or experiments all in English. They might paly a certain role in communication in English. Pos-docs and Ph. D. students in the institute also can command English, so we used it. But almost of them are French people, and we could talk more if I could speak French. I realized the importance to learn the mother tongue in the country to enjoy conversations more.

A lot of French people love to talk, and it seemed that speaking for one or two hours was normal even after lunch. In Japan, I usually talk less one hour on a weekday at lunch time, so I felt it was unique to French culture. Conversations are consist of more information exchanges and discussions than chats, and it was interesting to state our opinions eagarly. Also, by talking about local information, I was able to obtain the latest and more useful information than the web articles. I realized that such an opportunity for information exchange was important to enrich daily life in the internship.

Growth points and unachieved challenges

One of the growth point is that I could implement the machine learning methods which I have not touched from basic to applied. Also, I was able to discuss research in English to a certain extent, which also led to my confidence. The problem that I couldn't achieve was that I sometimes couldn't make clear how to design an experiment or to write papers. Sometimes I was so absorbed in the implementation that I became less aware of it. From now on, I would like to promote development and experiments always keeping in mind the output.

インターンシップ体験記　（続き）

Experience from working in different fields

There are a lot of things in common between my research and the host lab's one, but my research has not focused on exploring the relationship between machine learning and brain science. Therefore, I work on the research being attracted by its novelty. For the system development, though I needed to investigate from the basics when working on methods that I had not ever implemented, I enjoyed improving my programming skills. Experiences in the institute overseas also told me the atmosphere and environments of academia outside Japan.

Daily life

A lot of French people go outside on Saturdays and spend their Sundays with their families at home. I used to go shopping on Saturdays and spend my Sunday relaxing in my room. Researchers at the host institution guided me around the local area on a weekend, so I was able to heal the fatigue of weekdays while experiencing the culture and history of France.

For accommodation, I utilized a dormitory for international students attached to the university. Since many international students use it, I was able to proceed to the move-in procedure smoothly. There was no complicated procedure, and the rent could be paid with a credit card. The equipment in the room was relatively new, and I did not feel any inconvenience. Though there seem to be restrictions on the amount of showers used in France depending on the location, there was no such restriction in my room. But the water supply was a push-button type and stopped after a certain time, so I felt a little inconvenient when I took a shower. I felt that this is also the attitude to use water carefully.

Regarding meals, prices are high in France (even McDonald's can easily exceed 1000 yen), and most of the people in the laboratory cooked and brought their lunch from home. I was surprised because Japanese people sometimes buy it in shops and eat lunch. Since I only had a shared kitchen, I brought frozen foods. Perhaps if I could cook by myself, I could have reduced the cost of food.

As for security, I was scared when strangers on a road spoke to me (probably begging), but fortunately, nothing happened when I left the place immediately. I think where I was staying is safe in France relatively, but we cannot be too careful. It is good to think that unexpected accidents certainly happen in foreign countries.

Important lessons learned from the internship experience

Through the internship, I again realized the importance to understand the background and interest of other researchers and collaborate with them. Needless to say, a lot of discussions enables to do that. Of course, sometimes we may face difficulty result from its differences. But if topics or technologies are not familiar for us, trying to understand and stand in the point of them can lead to unexpected and better ideas or outcomes. I could encounter something that cannot usually be experienced only focusing on my research. These ideas and way of exploring research will be meaningful for own research fields. All in the internship are considered to be precious experiences to be a promising researcher in the world. I would like to continue to collaborate with the lab members in any opportunity.