

## 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 am a kind of a wet biochemist at Osaka University, but I stayed a dry laboratory at the University of Missouri, which is in Columbia, MO, the U.S. for two months (September to November) to study protein structures using machine learning techniques. I happened to do a two-month internship at a bioinformatics laboratory of a hospital in Canada immediately before the present internship, and I would like to compare the two internships for other students' information as needed.

## &lt;Preparation&gt;

I sent an email to the professor of the laboratory without any mediator in March to ask him to give me an internship opportunity. He did not either my boss at Osaka University or me but allowed me to visit and stay at his laboratory.

I managed to prepare my J-1 visa within a month mostly because the manager at the University of Missouri always replied really fast. I did not have any trouble at the visa interview at the U.S. Consulate; they asked only two questions, "Who would pay for you?" and "What would you like to do in the U.S.?". The picture of me that I brought there had a blue background and was not applicable, but I was able to take another picture there. When I entered the U.S., I totally forgot about the JS2019, but fortunately, I had it with me. You should have it with you at the pass control; otherwise, you would experience serious trouble there.

The hardest hurdle in the preparation was the typhoon that made the KIX airport flood and bridge broken. I had not known whether the flights would be canceled until immediately before the departure. I could not get exact information because of the flood of inquiries and the agency in chaos. Actually, I experienced the 2018 Osaka earthquake on the day of departure for Canada and had serious trouble to get to the airport. Having learned lessons, I would say that you should make an alternative plan beforehand in case of emergency.

The second biggest hurdle in preparation was finding the place to live and furniture. Fortunately, a university staff introduced her son who works as a realtor, and he introduced a colleague of him, and he introduced an apartment to live. The room was huge (800 sq/ft) and expensive (600 dollars a month) to live alone. It was in the basement and totally unfurnished, and the floor was made of concrete tiles and like an entrance doma in Japan. Fortunately, I brought a sleeping bag and yoga mat, and three girls at the same apartment gave me a bed, a carpet, a furry cushion, and a chair. Thanks to them, I did not have to lie on the firm and cold ground. In addition, a man who lived there let me use the internet connection for free. It was really helpful because the American social security number was required to get the internet environment.

## &lt;Laboratory&gt;

The laboratory consisted of one professor and 15 students (Figure 2). Around half of them were from China and others were from African or Asian country including Nigeria, Algeria, Saudi Arabia, Bangladesh, and Iraq. Just one student was American. We often talked about the cultures and languages of each country besides our researches.

We had a one-hour lab meeting on Mondays and Thursdays. In a meeting, each student shared their progress by word of mouth or slides and discussed the result and what they should do next. I felt that the students were getting motivated to make progress fast by the twice-a-week meeting. When I was in the laboratory in Canada, I had only one presentation during the two months, and I proceeded my study at my own pace.



Figure 2. The laboratory members



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## &lt;Study and Research&gt;

I studied and discussed the architecture of a neural network to predict protein structures from their amino acid sequence. I was not able to make much progress because I had only two months and it took much time for the preparation, such as permission to use the e-mail, server, and GPU. Still, the professor often told the lab members how to get promoted in the (American) academic society, so I learned a lot other than bioinformatics. Thanks to many experiences of discussion, I ended up to get the confidence to work among people with diverse cultures.

## &lt;Communication&gt;

I got to know a bit about how people over the world think about Japan. I often felt that Japanese people had advantages in conversation in the U.S. I was surprised that many people knew a lot about Japanese animation and comic books. I am not sure if the Cool Japan strategy has succeeded, but they knew better about Japanese sub-cultures than I did. I studied basic manners in the U.S. before I went there but should have studied Japanese subcultures to avoid letting them down.

## &lt;Cultures and Daily life&gt;

I felt that fall was the best season to come to the U.S because the weather was nice and I enjoyed many fall events such as a fall retreat, Halloween, the Homecoming party, football games, a tailgate party (Figure 3), caving, and the Nobel Prize press conference (Figure 4).

I joined a group of Christians to make American friends because I wanted to get to know a lot about American cultures and native English. I realized most graduate students are foreigners, but most undergraduate students are Americans. I used to go to a church twice a week to meet undergraduate students. The service in a church consisted of music performance and preaching (Figure 5). I realized their way to see the world is entirely different from mine, and I felt they lived in a sort of fantasy world. I also learned how do they think why Christianity is not common in Japan and why they feel the U.S. is the center of the world.

I heard Missouri is the "Show me state," which means people are skeptical before I went there, but the reality was different. They expressed a welcome attitude and were nice and generous to me before I showed them what I was. They always said, "Let me know anytime if you need help." when they realized I was a foreigner. Staffs at stores and restaurants are talkative and friendly, and I made some friends there. They said this was American hospitality. My friend's friend tried to give me a 100-dollar gift card even though we never met. The three girls suddenly came to my room before we met to give me several pieces of furniture and food. Some of my friends gave me a ride almost every day because there was poor public transportation. They even took me a large city that is 150 miles away from Columbia. I consider American people more easily trust strangers than Japanese people because they are exposed to social mobility and racial diversity. I should project my philosophy (since I am a Ph.D. candidate) to be predictable and easily trusted in a global community.



Figure 3. Jenga at a tailgate party



Figure 4. George P. Smith



Figure 5. Live show in the church