

JP-2020-AAZZ-M

Masters in Computer Science
4-th Hochschulsesemester, 2-nd Fachsemester
Japan
Internship
12.02.2020 - 01.06.2020
National Institute of Informatics, Tokyo

Japan is one of the countries on the forefront of technologies, as well as a a unique traditional culture, so I was always interested in visiting it. I have found out about the program from the email sent by our faculty's international exchange coordinator. NII provides a perfect match of visiting



the country and doing your studies. They have plenty of professors who cover very broad range of topics in Computer Science, so I think anyone can find the topic they are interested in to do an internship there. Many students are going to NII for doing their master thesis, and I think it is a good place for it as well.

The application process was pretty simple and straightforward: one should find an interesting topic from the list offered by the NII, and then send the complete application form and supporting documents to the international exchange coordinator, and wait for the decision from NII. It is recommended to contact professors from NII offering the topics you are interested in, and ask if they would support your application (the most of the decision depends on the professor).

After the acceptance the standard visa procedure is to be completed. It was not stated in the requirements before, but to get the visa, student must submit a recommendation letter from a professor of their university. After one gets the visa, accommodation and a flight are to be arranged.

The cost of living in Japan is pretty high and most of it is accommodation, you may expect to spend at least 100 000 yen per month (~ 800 euro). There is no problem with finding accommodation in Japan, NII sends a few references to the websites which offer accommodation services in English, and they are the optimal ones. It is possible to find a room in Tokyo within a week or even a few days. Accommodation is very expensive, you should expect living in a very small room (5-10 square meters) with shared kitchen and bath for at least 40 000 - 50 000 yen (~ 400 euro). The transportation is quite expensive in Japan and usually depends on the distance. I was initially going to buy a bike and commute mostly by bike, so I did not spend much on transportation, but you should expect to spend about 6000 - 8000 yen (~ 50 euro) depending on your location on transportation. As an intern you will not get any discount on public transport. NII provides overseas health insurance as well as one gets insured in Japan with their governmental

health insurance; 100% of medical costs are covered (except certain specific situations, like dentistry). In the beginning I was spending a lot of money on food, because I was buying mostly in so called `combinì` (24 hour convenience stores), and dining in cafes, but you can save much if you buy food in a cheap supermarket. Precooked food is ubiquitous in Japanese supermarkets, so you don't even need to cook anything, except rice which is very easy because they have rice cookers in any house.



I was really stressed upon arrival, because Japanese people in general do not speak English, so I was afraid of having problems with communication. On the other hand, everything is very well organised there, so that in most of the cases it is very clear what to do and where to go, they have signs and posters with the directions everywhere. Foreigners must register their address and obtain public health insurance at a local city hall. I had no problems with it in Tokyo, employees of the city hall usually do their best to help you. It may be very confusing at first, but there are always people who can help you.

NII is located in the very centre of Tokyo. The work is organised in labs with a professor as a head. Each lab is doing research in particular topics of the professor's interest. As in Germany, working conditions are highly dependent on particular professor and their lab. NII has many foreign professors as well as Japanese, so it is very international. If you are thinking about academic career, NII offers PhD positions as well. Doing an internship there at first is a good way to get a better understanding if Japan suits your academic goals and standards of living.



The lab of my professor is on 16th floor, you have an amazing view on the city from there. Working conditions are pretty comfortable, but not something special. Even though it was stated that students should use our own PC, they have provided me with a PC to work on. The atmosphere in the lab I was working was very welcoming. We had good communication with the researchers in the lab and the fellow students, spent much time

together on the weekends, and even did a trip in the mountains for winter sports.

Our lab was involved in the development of AI component for people detection, road block detection, and landing spot detection in the context of a joint project of our lab, Chiba university and other parties of participation in the international Advanced Robotics Challenge competition. My research has been concentrated in road block detection submodule. I had no experience in the area I worked before, so it was very beneficial for me. I was able to learn new technologies and new methods of image processing, improve my understanding of AI and computer vision. Lab researchers were helping in getting the right result and directed my work, and there were no pressure. The work in the lab was a combination of theoretical and practical. We did not only development, but field testing and collecting of the data from the real drone, so it was really interesting and rewarding to see how your work is applied in a real working solution. As my topic was very specific and applied I had a major challenge with the lack of previous research and open solutions in this area. The problem seemed simple at the beginning, but turned out to be not that trivial. As my time was limited to just 3.5 months, and we had lack of data from the field tests, it was very challenging to develop a fully fledged solution, I was able only to make a good head start and solved only a part of the subproblems, and to propose approaches to tackle the subproblems left. The competition was rescheduled to a later date, so I am still looking forward to it and the for the results of our team.

Even though my stay was right in the middle of COVID-19 pandemic, I felt very secure in Japan. There were no strong restrictions or fines in Japan. NII has offered their collaboration and help, so I didn't feel lost in the country, they also helped to get tickets for the flight back, because my flight was cancelled. They were helping financially and psychologically, it was a very positive experience.

Even though Japanese people try to do their best, most of them do not know English, so communication problem still exists. I have also noticed that Japan is very bureaucratic and very stiff sometimes. It was a bit disappointing that NII didn't organise some cultural workshops or tours, so you will have to learn Japan and their culture on your own. Certain things are very different to the western world and you may need to adapt to it, for example: you are likely to attract many looks and may not be allowed at certain places if you have tattoos (not the case for me); smoking is prohibited all around so you will have to look for special areas to smoke; eating while walking is regarded as impolite, so there is no rubbish bins on the streets, you will have to carry all the rubbish with you back home. As a foreigner you are treated in a different way, and not always in a better one.

I had luck to go in Japan at the best season (Feb - June), and enjoyed snow in the mountains, amazing sakura blooming and sunny days, and left right before very humid and hot rainy season. It was an invaluable experience to discover Japan, breathtaking Tokyo and to do research at NII.

