STEPS Students Report

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My name is Dasha Kryutchenko and now I'm finishing Master program in SPBU University. Studying on the 1st course in the Institute of Earth Sciences, in 2017 I've first time heard about STEPS program. Of course, I've decided to try my best and send all the documents to Tokyo University to take part in the selection procedure.

Several months later I've started working with Sekimoto-san laboratory and living in the heart of the biggest megalopolis of the world.

My specialization is economic geography and city growth analysis methods. One of the most popular and relevant way to work with spatial information now is GIS (geographic information systems). That's why Sekimoto-san lab with projects mainly made in Human Centered Urban Informatics was the best choice for me to get new knowledge and experience.

Combining methods used in Russian and Japanese scientific fields I could start working on my dissertation topic: "Economic and geographical forecast of Saint Petersburg city's space development up to 2030". What is it about? What is the main aim of studying?

My research advisor and I decided to analyze the most growing districts in Saint Petersburg during last years. Parts of agglomeration are developing unequally and we need to understand how infrastructure and population factors will affect the social climate in the particular parts of the city.

In Japan I decided to prepare data and all the calculations to make the correct forecast of city changes up to the certain indicators (using QGIS program for spatial analysis).

The first step was studying Japanese and Sekimoto-san experience in data analysis and urban planning. We've discussed and identified the clue factors and indicators: population (in focus of age groups), administrative units of the city, road network and public facilities (schools, hospitals, green zones, atc.); made the plan for the work.

The second (the biggest part of the work) was collecting all the information (methodology and data) for the MyCityForecast in the case of Saint-Petersburg. It took time but gave the big experience. The first time during my study I worked with PostgreSQL and trained the basis in programming. It was quite difficult (my main education is more humanitarian than technical). But the result was quite good and also qualitative. I've prepared all the tables needed for downloading Saint Petersburg's data on the website: https://mycityforecast.net/. It helps a lot to visualize the results of the forecast and agglomeration growth (in time).

Now we are still contacting to finish the work and put all the results to the website which

Sekimoto-san lab members are working on. Also all the data and methodology will be the part of my master work (finishing it now and will present in June).

The whole program and international exchange was a bit difficult but very useful for me as a personality and as a growing professional in the field of science. Each week I've got a piece of new knowledge from colleagues from all over the world (China, India, Egypt, Indonesia, Singapore etc.). Even if I had a small question all lab member were ready to help me. I hope other students will also have such chance to work and study in a Japanese scientific environment.