

FGL Community Newsletter



Springtime Sizzle: BBQ on the Riverside

Bring some smores and join us in this special
coverage of this year's FGL Spring event



Springtime ❁ ❁



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Writers

Kamila

Alicia

Steven

Robert

Avin

Jesus

Sathya

Art

Mimie

Proofreading

Alisa

Editor

Max

Welcome
FGL

After what felt like a very long and cold winter followed by a series of temperature fluctuations, spring has finally come to Sendai. From our observations, this seems to be the most popular season with FGL students, what with the beauty of its arrival, (mostly) nice weather for months on end, and the general vibe it brings to our classes and club activities. So pack your puffer jackets and trench coats in, take your shirt jackets and anime sweaters out, and enjoy the spring outdoors of Sendai with us!

- The FGL Community Committee

Springtime Sizzle: BBQ on the Riverside

Kamila Putridifa

Alicia Adrian

The cool spring breeze has welcomed the beginning of a new season. Sakura trees have started blooming, and winter jackets are no longer needed. Welcoming this new season, the FGL Community held its first event in quite a while, kicking it off with a BBQ event. Held in the evening at Hirose River Ushigoe Park, the event was initiated and hosted by one of the first-year AMB students, Umit.



“I’ve wanted to organize it for a while and was very happy it got recognition from the FGL staff and community. Also wanna thank Alicia, Dash and Koharu for helping with the event. Hopefully we’ll have more in the future,” Umit explained. He had prepared the halal chicken skewers himself along with his friends to serve at the barbeque. Roughly eighteen students from the first to the third year of FGL gathered to enjoy the spring atmosphere as they savored the mouth-watering grilled chicken skewers. While Umit was grilling the chicken skewers, everyone chatted and vibed along to the music played through a speaker.

It was a rare opportunity and a breath of fresh air to finally have close interactions with seniors and juniors despite conflicting schedules. Even during the middle of the semester when everyone is juggling laboratory duties, club activities, and many more responsibilities in academics or just life in general — they all managed to enjoy the evening. Then to wrap it all up, they had a mini marshmallow roast, a little sweet delight to end the day.

As everyone left the river park, they still had smiles on their faces while chattering and laughing on the way back to the Kawauchi station. After such a long hiatus, everyone is looking forward to seeing the FGL community come up with new events in the future. We hope to continue this tradition of hosting events throughout the year, and to eventually expand and connect more people. Until then, see you at the next event!



Photo credits to Max and Avin



Ask Senpai: Hansen Witarsa

Steven William

Robert Wrobel

Greetings! This time we have decided on interviewing someone with a quite unique and challenging achievement. That is, early graduation! Hansen Witarsa graduated from the IMAC-U program this February. We decided on asking the Indonesian about how he was able to graduate a whole semester early, manage his time in such a situation, and what his plans are afterwards.

The choice to pursue an early graduation was not a plan that he had considered upon joining the IMAC-U program. Around the end of his third year, the university proposed the idea to his laboratory professor, which was how the idea was brought upon him. Of course, the decision to pursue an early graduation meant that he had half of the time left to prepare for it. After weighing the pros and cons and consulting with his professor, friends, and family, he took up the challenge. It is by no means the easy path, but he hoped that this would allow him to have more time for his future post-graduation. Although at first that future plan had been to continue his studies for a master's degree, he decided that gaining some work experience for a year or two would be a good way to find clarity with the direction of his master studies.

This is the research title that he worked on towards his graduation:

Pedestrian Trajectory Prediction based on Spatio-Temporal Interaction Modeling using Graph Convolutional Network and Long Short-Term Memory

Many of you may have seen robots navigating streets, shopping malls, airports, or other public spaces. These robots may be delivering food, providing guidance, and so on. But the most important thing is safety, especially for the robots to not collide with people walking. In order to achieve this, the robots must be able to predict the paths that pedestrians will take, allowing them to plan their own trajectories accordingly. That is the initial idea for this research. By utilizing publicly available datasets of pedestrian movement, I aimed to predict future trajectories while minimizing prediction errors.



I developed an algorithm using various machine learning models, including Long Short-Term Memory (LSTM), a type of recurrent neural network (RNN), and Graph Convolutional Network (GCN). Throughout the research process, I iteratively trained the model to reduce errors and improve prediction accuracy.

Now that you've heard some of his story, would you be interested in pursuing an early graduation, specifically as an IMAC-U graduate? Before deciding, here are the answers to some of our questions to paint a more detailed picture of what his journey was like.

What did you like to do in your free time, before and after joining a lab? Were they any different?

Before joining a lab, if I had free time, I would usually just stay in my house. Sometimes, maybe play some games, sleep, or study. I've had a period when I tried the library as a study space, but in the end, I found my home more comfortable. So, that's how I spent my free time most of the time.

But then the lab came, and honestly speaking, mine was a bit tough. Just after I joined the lab, I had to join a course to use the Robot Operating System and the Robot Manipulator Arm. Both of them required me to conduct some personal projects and then present them, so the workload was quite heavy at that time. Most of my free time has been spent in the lab. And, quite surprisingly, after some time, I've started enjoying working there more than in my home! That was quite strange, considering how much I enjoy the comfort of my own house.

But, moving on, after the courses were done, I had to start my graduation research almost right away, and yet again, my free time was mainly in the lab. But that's not too bad! The environment was comfortable and the people were great, nice and supportive.

Did you manage to have a work-life balance you're satisfied with, or did you feel like you had to sacrifice some things? If it's the latter, would you say it was worth it?

Before joining the lab, I felt like the work-life balance was quite good. I've studied quite hard, but on the other hand, I have a lot of time to do other things. Nevertheless, after joining a lab, the work-life balance shifted a bit towards work, obviously. I had a bit less free time due to more work and projects.

For some people, it's not fine, and for others, it is. They might just enjoy working or studying more than different activities. And I think I fall into the latter category. Personally, I don't mind having more work. Of course, I had to sacrifice my free time. It was quite common that I would be in the lab from afternoon to night. Feeling tired and bored every day is a normal thing at the time... But, as long as I can achieve my goal in

the end, I think all the sacrifices are worth it! I believe that if you want to achieve your goal, you might have to give up work-life balance and sacrifice a couple of things.

But I can definitely tell you that it will all be worth it in the end!

Which year or semester of your IMAC-U study do you think is the most fun, and which is the most dreadful?

I am going to start from the most dreadful, but fear not! It will get better. I think there is no semester where it felt "easy". I remember the first year of studies and it was not great. But it was mainly the COVID-19 made it so. Admitting to university in 2020 means the people in my batch couldn't go to Japan for a long time.

We had to spend 1 to 1.5 years studying online in our country. Making friends was not easy. I felt like I was alone during the first year, even though I knew some of the other students. Because we have not seen each other face-to-face, it was hard for me to reach out to them to maybe ask something or even just to chat. As if that were not enough, there were so many classes that we had to take. It felt like I just studied alone from morning to evening without being able to do anything...

Fast-forward, I have finally arrived in Japan in March 2022. And then, right away, the semester started. I think it was in the middle of my second year. It was quite a fun semester! I've finally met my friends for the first time face-to-face. Even though there were still many classes, I enjoyed the semester. I've got friends to talk to, and I've got to visit a lot of places in Sendai, just having fun!

The semester after that was also quite enjoyable – the beginning of third year. But I still preferred the previous semester. But it's just because I like summer more than winter. Winter might be a little too rough for me.

Some words of advice from him:

If you get a chance for early graduation, it is totally up to you whether you want it or not. I think there is no correct answer, since both choices have their own pros and cons. But in case you are interested in early graduation, I think you should do your best in the graduation research, since you will only have a little time to complete it. Completing your credit goal before the fourth year is also a good idea, as it will lessen the burden of the research. And the last, quite obvious thing is grades; if they are good, you have better chances to graduate early.

So, good luck to all of you studying in Tohoku University.

Seasonal Article: Hanami Is Not Just Sakura

Avin Sharma

Usually, many people have a misconception that Hanami (flower viewing) is limited to Sakura or cherry blossoms. But that is not the case as Spring is the season of flowers and there are a plethora of varieties of flowers to see!

Hanakotoba, the language of flowers, is an important part of Japanese culture in which flowers are given symbolic meanings. Every flower holds its own meaning, enabling people to express feelings and communicate through bouquets of flowers. In the essence of Japan's springtime magic lies a variety of floral wonders to uncover beyond the traditional sakura. In this article I have compiled a few places and their respective Hanakotoba.

Wisteria (藤 ふじ)

Wisteria signifies kindness and welcoming nature. It also happens to be on the logo of Tohoku University. At Ashikaga Flower Park, located in Tochigi Prefecture, the stunning wisteria displays captivate visitors every spring. The park's Great Wisteria, a sprawling vine forming a mesmerizing lavender canopy, enchants visitors who stroll through wisteria tunnels, surrounded by a whimsical ambiance of fragrance and petals dancing in the gentle breeze.



Sunflower (向日葵 ひまわり)

Sunflower signifies respect, passionate love and radiance. In Hokuryu Town, Hokkaido, vast sunflower fields herald the arrival of spring with golden radiance at the Hokuryu Sunflower Fields Festival. Against Hokkaido's expansive backdrop, the sunflowers symbolize the promise of warmer days ahead and the abundance of nature's joy.



Azalea (躑躅 つつじ)

Azalea signifies patience and modesty. Nezu Shrine in Tokyo's Bunkyo Ward boasts a spectacular azalea garden bursting with vibrant colors in early spring. The annual Bunkyo Azalea Festival celebrates the blossoms' beauty, allowing visitors to wander through the garden's paths and appreciate nature's exquisite craftsmanship.



Plum blossoms (梅 うめ)

Plum blossoms signifies faithfulness and elegance. In Kyoto, Kitano Tenmangu Shrine welcomes spring with delicate plum blossoms from over 2,000 plum trees of various hues. The Plum Blossom Festival attracts visitors eager to witness nature's resilience and the promise of renewal amidst the ending winter chill.



Let's not limit ourselves to just sakura during hanami season in Japan. Let's embrace the deeper meaning of nature as we surround ourselves with it, for hanami is a celebration of nature's boundless beauty in all its forms.

Ask Sensei: Dr. Andrea Vergara

*Jesus Urbaneja
Sathyannarayanan*

Can you start by telling a bit about yourself?

Hi, I'm Andrea Vergara, I'm from Chile. I majored in Mechanical Engineering and specialized in Robotics. I liked playing video games as a kid and liked games where you can build stuff, like Age of Empires. I have been wanting to play Minecraft, but this part of my career is not the time to play, is it? ^^.

Tell us a bit about your time in Chile and your experiences doing your degree.

Unlike other countries, your Engineering degree is a 6-year course in Chile. For the first 2 years, you take general courses with other students and by the end of your second year, you choose the department you choose to specialize in (say electrical or mechanical). I was confused at first if I wanted to do chemistry or physics, because I had been taking classes on materials too, but ended up deciding on robotics. Then, I continue doing my degree, specializing in robotics. After graduating, I started working for a startup company with my advisor.

I also had to publish a paper as my graduation thesis, similar to Tohoku, but we only had a year to work on it, so I couldn't work a lot on my paper. I chose the theme of soft robotics for my graduation project, where I made nano-sized cubes with silicone elastomers that were hollow in the middle. So I go on and inflate these voids with air, and join these structures with magnets. The difference in inflation levels in cubes can be used to perform various tasks and make the structure as a whole move. Or keeping it simple, we make up a circuit and light up an electric bulb!

Now, I work on micrometers, focusing on LIDARs, which, to dumb it down, are SONARs but with lasers. You project a laser beam onto a reflecting surface, and when the beam gets reflected, you can measure the distance between the laser source and the surface.

That sounded like the embarking of a long journey, phew! Could you tell us more about your time working in Chile?

OH yes! I worked in the company for about a year. Chile is very big in mining, especially copper mines. They have such long pipes in the mines that extend for kilometers even! So it becomes pretty tedious to locate/repair defects or faults in the pipeline.

Our startup manufactured miniature robots that could go around these pipes checking for defects or faults in the pipeline. My job in our startup was to look up and create the mechanical design for these robots.

What made you choose Japan over other destinations to pursue a higher qualification?

Well, the major reason was Japan being highly developed technically and intellectually in robotics. I contacted my professor over the email, (I was very surprised at how fast I got replied to :O) he advised me to get into a direct PhD degree, looking at my academic history to date. It was a very quick process and I ended up coming to Japan. I was also very intrigued by the fact that robotics in Japan is developed more on the mechanical side of things than the electrical side. Usually, if you ask people who specialize in robotics in other parts of the world, they would tell you about how electrical engineering is a major part of their career, but in Japan, it looks over at the mechanical side of things and that was right up my alley, considering I liked the design part of robotics over the electrical and the coding part.

How was the experience of doing a degree in Japan?

Oh, how refreshing! I was surprised by how I didn't have to take loads of classes, I remember taking around 4 courses, the whole of my PhD degree. It was very research-oriented and I loved it. Throughout my PhD degree, I also did a 6-month exchange program in Taiwan. I was continuing my research project going on back then, just at a different place. I was receiving feedback from 2 different professors on my research and it was very helpful. The seniors in my laboratory were very kind to me. Not only did they help out with my research, but they would introduce me to good restaurants, and attractions around the place and help me enjoy my exchange program. I want to go back and visit them, and go hike the tallest mountain in Taiwan maybe! ^^

When I first arrived in Japan, like almost all international students, I lived in the dorms at Aobayama. The first summer here, when I heard the cicadas near the dorms I thought to myself, [Oh, these actually existed in real life and not just anime! :D]. I also get surprised by how safe Japan is. I could leave my bag at a table in a cafe, and it's not stolen away?! When I walked through the arcades for the first time in Japan, the first thing I thought to myself was [Uh, These are NOT surviving a day back home, these machines are going to be taken away.]

Could you delve a little deeper into how your lab worked and your experiences during the COVID period?

It wasn't too bad :D. During the COVID period, our professor decided that everyone would take turns working, ensuring that no 2 neighbors (the seating arrangement) would work together on the same day or in the same time slot. Of course, there were

strict rules about maintaining hygiene, and our timetables were handed out based on what I described earlier, but it didn't last a month even hahaha. I remember this one time we had an international online conference, so to have a neutral timezone for everyone who attended the conference, the time of the conference was changed after consulting with everyone who attended it. Of course, we got the shorter end of the stick and it started around 10 pm and would go on until 3 am. The week the conference went on, my sleep schedule was so [messed] up. I would go to bed around 3 and would have to wake up and go to my laboratory around 10 am. We also had online parties, which of course were not the same as having them in person, but hey something is better than nothing you know!

Thank you for reading the spring 2024 issue of the FGL Community Newsletter! See you next season!



See you

