Findings through JUACEP



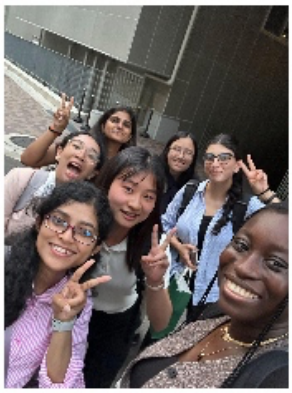
Name: Erin Diran-Ojo
Affiliation at home country: University of Michigan, Electrical and Computer Engineering
Participated program: JUACEP 2026 at Nagoya University
Research theme: Low-loss inductor design for captive power transfer systems
Advisor at Nagoya Univ: Professor Masayoshi Yamamoto
Affiliation at Nagoya Univ.: Department of Graduate Engineering, Electrical Engineering, Power Electronics Lab

When I started my research for the JUACEP program, I was not sure what to expect or what I would have to do differently compared with my work back home. For the past few years at my home institution, I have been conducting research in a similar field, so I expected that many aspects of the research process would feel familiar. However, the opportunity to conduct research not just in a new lab, but at a new institution abroad, has shown me new approaches to problems that I had previously taken for granted. Working in a different research environment gave me the chance to see my previous work from a new perspective and better understand how the skills I have developed can be applied in different settings. I truly believe that this experience may shape the direction of my future work in RF research and influence the types of problems I choose to pursue.

Starting a new project for the summer, I was not sure how I would find my footing in a new environment or learn the new systems and methods I would be working with for the first time. I was actually surprised that taking an essentially “from scratch” approach to this project became an inspiring change from the way I normally conduct research. Rather than relying heavily on the methods and knowledge I had already developed, I had to spend more time asking questions, learning new techniques, and figuring out solutions as I went. This challenged me to become more comfortable with uncertainty and reminded me that research is often about exploring unfamiliar ideas rather than immediately knowing the right answer. Without this experience, I am not sure I would have had another opportunity to take such a huge leap outside of my routine and challenge myself to approach research in a completely new way.

This, of course, would not have been possible without the group of students I was able to meet during my time in JUACEP. Both the members of the PE Lab and the other JUACEP students were essential to everything that I was able to learn and enjoy during my time at Nagoya University. Having people around me who were willing to share their knowledge, answer questions, and help me adjust to a new environment made the transition much easier. Beyond the technical knowledge I gained, I also learned how valuable collaboration and relationships can be when working in a research environment. I learned a lot from the process of coming abroad to do research, but I learned even more from the people I was able to work with and the experiences we shared together.







Findings through JUACEP



Name: Yu-Chieh Li
Affiliation at home country: Mechanical Engineering, University of Michigan
Participated program: Summer Course 2026
Research theme: Information-Theoretic Active Perception For Bud Detection In Autonomous Grapevine Pruning
Advisor at Nagoya Univ: Prof. Yasuhisa HASEGAWA
Affiliation at Nagoya Univ.: Micro-Nano Mechanical Science and Engineering

I wasn't expecting my summer research program to be this fulfilling before coming to Japan. On the first day of the JUACEP program, I was nervous about what research I would be doing, the language barrier, and whether I would be able to get along with people in the program. However, those worries gradually disappeared once I started spending time in the lab. I soon realized that it was a very supportive community where everyone was willing to help one another, and I felt very welcomed. Even though some students did not speak much English, they still tried to talk to me, and somehow, we always found ways to click.

I would like to thank my advisor, Hasegawa-sensei, for having me in his lab during the summer. He encouraged me to open up to people in the lab, which he thinks is just as important as doing research. I would also like to give special thanks to my lab mate, Ueno-san, with whom I mainly collaborated on this research. I really enjoyed our collaboration, and we worked very well together. Since this was my first time doing robotics research in the perception field, I had so much to learn. The members of my lab were very supportive along the way and answered all the questions I had.

Outside of the research, I also had many opportunities to enjoy life in Japan. I often went shopping at Aeon Mall, where I enjoyed going to Uniqlo, Muji, GU, and other stores. The food at the supermarket always looked so good that I wanted to try everything. I also got to travel to many cities in Japan, including Fukuoka, Kumamoto, Kamakura, Toyama, and Hiroshima. I especially enjoyed the road trip in Kyushu with my family.

Through the JUACEP program, I was able to conduct cutting-edge robotics research and gain hands-on experience in implementing active perception for agricultural robot. At the same time, the program gave me many opportunities to explore Japan and meet new people. The memories we made during the excursion were some of my favorites. Sometimes, simply going to a restaurant or hanging out with friends from the program was a lot of fun.

Overall, I think JUACEP was an unforgettable experience for me. It allowed me not only to learn more about robotics research, but also to experience life in Japan, and build friendships with people from different backgrounds. I would recommend the program to anyone who is interested in exploring Japan while gaining valuable research experience.













Findings Through JUACEP



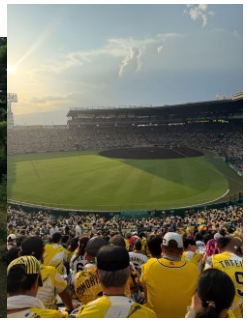
Name: Lucas Armyn
Affiliation at home country: Aerospace Engineering, University of Michigan
Participated program: Summer Course 2026
Research theme: Propellant-Injection Film Cooling in Rotating Detonation Engines: Numerical Modeling and Hot-Fire Evaluation of Equivalence Ratio Effects
Advisor at Nagoya Univ: Dr. Jiro Kasahara
Affiliation at Nagoya Univ.: Aerospace Engineering

Returning to Japan as part of the JUACEP program was one of the best decisions I have ever made. What I had seen once before was unveiled in a whole new way, getting to see what life is like for students and professors in such a prestigious laboratory as Nagoya University firsthand and how it differs from University life at home. It also gave me the opportunity to travel more through Japan, seeing places I had never seen before and revisiting some old memories in a new way.

The experience of working in the lab in Nagoya was my first experience with lab work, and it did not disappoint. The students and professors who helped us were kind and patient, and the work we did felt exciting and meaningful, especially when we were allowed time with the vacuum chambers to actually test the systems we were working with. Our program advisors were also exceptional, organizing several workshops and events where we got to participate in academic, cultural, and social endeavors together as a group.

When you hear about Japan in the U.S., you often hear the same things repeated; delicious food, beautiful nature, fascinating history. These are all true, but these are things you hear about from a tourist's perspective, oftentimes a perspective that never left the shallow end of the pool in tourist hubs like Shibuya. This program gave us the opportunity to see a little bit deeper than that. Working alongside students in the university we got to see what life is like for people away from the flashing lights of Tokyo or beautiful temples of Kyoto where so many people visit. My time here reminded me of a quote from Anthony Bourdain that I absolutely love, ‘Be a traveler, not a tourist.’ This program gave us the opportunity to do just that.



Exploring Flight Dynamics and Culture: My JUACEP Experience at Nagoya University



Name: Sergio Lopez
Affiliation at home country (Dept & Univ): Department of Aerospace Engineering, Rackham Graduate School, University of Michigan
Participated program: Summer Course 2026

Research theme: Fixed-Wing UAV Approach Trajectory Control Using 2-DOF Control under Wind Disturbances
Advisor at Nagoya Univ: Prof. Susumu Hara
Affiliation at Nagoya Univ. (Dept.): Department of Aerospace Engineering, Graduate School of Engineering

During my time in JUACEP, I conducted research on flight control systems under Prof. Susumu Hara in the Control Systems Engineering Laboratory. Conducting hands-on wind tunnel testing for UAV dynamic modeling offered a rewarding research experience, enriched by close collaboration and technical discussions with my lab mates.

Beyond the lab, living in Japan was an unforgettable adventure. I loved taking the Japanese language class alongside my fellow JUACEP members, joined program trips to the Toyota Commemorative Museum, explored Seki, caught a Chunichi Dragons baseball game, and played basketball with international friends. My lab mates introduced me to Gifu and Ise, while an Obon holiday trip took me to Tokyo, Kyoto, and Osaka with a hometown friend. Experiencing Nagoya's food scene, karaoke, and vibrant nightlife made daily life outside the lab just as memorable.

This program broadened my perspective on global engineering collaboration and cross-cultural teamwork. I am deeply grateful to the JUACEP office, Prof. Hara, and my lab mates for an incredible summer that contributed to both my academic path and personal growth.



Findings through JUACEP

Name: Uly Borek



Affiliation at home country (Dept & Univ):
Department of Aerospace Engineering, University of Michigan

Participated program: Summer Course 2026

Research theme: Multi-Vehicle SILS Development for Nanosatellite Formation-Flight Verification and Experimental Support for Quadrotor Rotor-Interaction Testing

Advisor at Nagoya Univ: Prof. Shigeru Sunada

Affiliation at Nagoya Univ. (Dept.):
Department of Aerospace Engineering, Graduate School of Engineering

During the JUACEP program, I worked under Professor Shigeru Sunada and Professor Takaya Inamori. My research activity had two components: developing a software in the loop simulator stack intended to validate hardware in the loop simulation programs for eventual deployment to nanosatellites in space, and experimental support for wind tunnel testing of propeller flow field interactions.

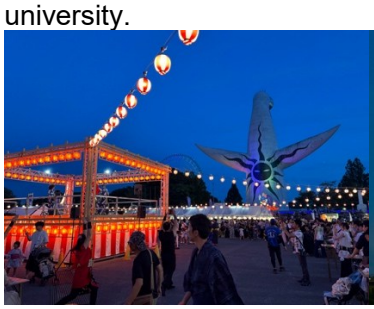
I think that the process of working through a language barrier and applying knowledge from my aerospace classes in a practical setting has helped me better prepare for future job opportunities in industry and academia to a significant degree. When a language barrier is present, it really forces you to more closely examine what you're trying to say and why you're trying to say it – fundamental reflective skills that improve one's effectiveness as an engineer.

Alongside my research, I also participated in the program's introduction to Japanese course which was very helpful for daily interactions during my time in Japan, like ordering food or asking for directions.

Despite not knowing much Japanese, everyone I met during the program, including my lab peers especially, was very welcoming and supportive which made the transition to living in Japan much easier and less stressful.

I also had the opportunity to travel during the weekends and the Obon holiday week. Japan's vast bus, subway, train and Shinkansen networks make travel surprisingly inexpensive and convenient. Even flights can be quite affordable if you purchase them in advance. Over the ten-week period, I visited cities and towns such as Tokyo, Seki, Sapporo, Otaru, Kyoto, Osaka and Naha. Some of my fondest memories are of feeding the deer in Nara, exploring at the Expo'70 Commemorative Park Summer Festival in Osaka, seeing Ado in concert, and snorkeling in the reefs near Okinawa.

Life moves pretty fast. If you don't stop and look around once in a while, you could miss it. Most rewarding of all are the friendships I've made here that will carry on long past the conclusion of the program. JUACEP has been, without a doubt, one of my most memorable experiences during university.







My Time in Japan Through JUACEP

Name: Grayson Morris
Affiliation at home country: NCSU ECE Dept.
Participated program: Summer Course 2026

Research theme: AlInGaN Epitaxial Growth
Advisor at Nagoya Univ: Prof. HONDA Yoshio
Affiliation at Nagoya Univ.: Department of Electrical Engineering and Computer Science

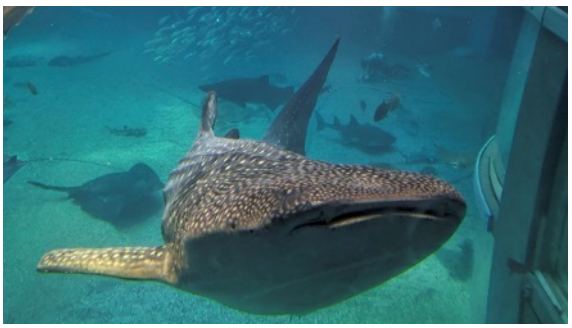


The JUACEP program was great program for providing an opportunity to work in a Nagoya University research lab while also exploring Japan for a summer. Not only was I able to gain experience in semiconductor epitaxy at one of the leading laboratories in my field, but I was able to do so while also exploring Nagoya and the areas around the university. This summer program led me to meet many great friends and may great connections with my peers. When I first applied, I was worried I would be on my own for a lot of my time in Japan, but I was introduced to several people and worked with some great folks.

I had always planned to take a trip to Japan one I had enough time off from school/work, but I never expected I would be able to spend the whole summer there while also working in impactful research in my field. It was great being able to explore different parts of Nagoya and the surrounding area on the weekend. If felt like I was living there more than an extended trip abroad. The people that live in Nagoya are unlike the rest of Japan. It feels like a bit of an isolation bubble in the best way possible. In my time there I felt more integrated into life rather than being a tourist. While I spend most of my time in Nagoya, Obon break allowed for travel to various other cities where I gain a better understanding of the varied culture in the regions of Japan.

My research opened many doors for future collaborations and gave something to think about during my graduate studies back home. I can see myself returning to Japan for an extended period for both work and travel. After this program the idea of working in Japan seems more plausible as I gained experience working in a primarily Japanese environment. The people I meet there including my TA and professor were both welcoming and willing to help me adjust to life in Japan. Collaboration with Japanese research I something I now consider myself comfortable and experienced with.

I would absolutely go back if given the opportunities and I am extremely grateful to the JUACEP staff for making this program possible.







JUACEP SUMMER 2026

Name: Mason Stimach
Affiliation at home country: North Carolina State University, Department of Mechanical and Aerospace Engineering
Participated program: Summer Course 2026



Research theme: Effects of Variable Slit Geometry with Clustered RDEs
Advisor at Nagoya Univ: Professor Jiro Kasahara
Affiliation at Nagoya Univ: Department of Aerospace Engineering

Participating in JUACEP this summer has been one of the most rewarding experiences of my time as a graduate student, giving me the chance to grow as a researcher and to experience what it is like to live and work internationally. At the beginning of the program, I didn't know what to expect, but between the research, the other JUACEP students, and daily life in Japan, it gave me a clear picture of both by the end of the summer.

My research for the summer was in Professor Jiro Kasahara's lab in the Department of Aerospace Engineering at Nagoya University. During that time, I studied the effects of variable slit geometry on clustered rotating detonation engines working under a graduate student. The lab was mostly Japanese graduate students, along with a few other international students, and the day-to-day atmosphere reminded me a lot of the lab I work in at NC State. Everyone was very welcoming and easy to work with, and it was a great experience to see how a lab operates in a different culture, from sitting in on lab meetings and going to lab lunches with the other students.

During the summer I lived in the international dormitories near campus and got around Nagoya mostly on foot or the subway, which gave me a good idea of the city as somewhere to live. The food was one of my favorite parts of the city; Nagoya has a few local specialties like, misokatsu and mazesoba, and both were incredible to try. Compared to the bigger cities like Tokyo, Nagoya stood out to me because of the noticeably less tourists, which made life and work feel more genuine. One thing that stood out the most was how friendly people were, both in the lab and around Japan. Everyone was always willing to talk with us or answer questions, which made adjusting to a new culture much easier than I expected. The most difficult part, if anything, was the language barrier at times.

Another great part of the summer was getting to meet and connect with the other students in the JUACEP program. As a group we went on outings together, including a baseball game, meals, and exploring different parts of Nagoya. Having other people going through the same adjustment made the experience much more manageable. I also really enjoyed the optional Japanese class offered through the program. I came in without much background in speaking Japanese, and the class helped me feel far more confident talking with people outside the lab, letting me experience more of Japan than I think I would have otherwise.

Overall, this summer has made me seriously consider pursuing a PhD in Japan, something I was open to before the program but now feel much more confident about. JUACEP also helped me build real connections to a lab and a community outside the US and made it clear how valuable the ability to work across cultures will be for my career going forward, whether that path leads back to Japan or not. This experience will stay with me, and I think it will have a real impact on my future career and school choices.

Findings through JUACEP (Change the title as you like)

Name: Nathaniel Michnoff
Affiliation at home country (Dept & Univ): NCSU Aerospace Engineering
Participated program: Summer Course 2026

Research theme: Rotating Detonation Engines
Advisor at Nagoya Univ: Prof. Jiro Kasahara
Affiliation at Nagoya Univ. (Dept.): Aerospace Engineering



My ten weeks at JUACEP were one of the most valuable parts of my PhD so far. Working with a lab that has led the world in detonation physics and experiments has sharpened both my experimental skills and my understanding of the field.

Nagoya University gave me everything I needed to do experimental work. The lab environment was rigorous but also genuinely collaborative. My lab mates were patient with my Japanese and quick to include me in both technical discussions and everyday lab life.

The Japanese class with Yasui-Sensei was a highlight outside the lab. It gave me a shared experience with other JUACEP students and the tools to navigate daily life and have real conversations with people outside the university.

Nagoya gets called boring online, but I disagree. It's got a great mix of history and modern industry, and plenty of character. It was a great place to explore after a day of work, and has a lot of places nearby to make great day trips. Kyoto and Osaka are both easy day trips and gave me a more traditional side of Japan to compare against Nagoya's energy.

Living here also showed me cultural differences; the precision and preparation that goes into lab work and a work culture that's intense but still respects balance. Adjusting to that was part of the experience too.

Professionally, this program shaped where I want to take my career. As a PhD student planning to stay in academia, it expanded my network, deepened my work in detonation-based propulsion, and gave me a real connection to a lab and university I'd want to come back to. I'd love to return to Nagoya as a postdoc someday.











Findings through JUACEP (Change the title as you like)

Name: Nahruma Mehzabeen Pieu
Affiliation at home country (Dept & Univ): North Caroline State University; Civil, Coastal and Environmental Engineering
Participated program: Summer Course 2026
Research theme: Numerical Investigation of Storm-Induced Wave Controls on the Opening of Midnight Pass During Hurricane Helene
Advisor at Nagoya Univ: Prof. Tomoaki Nakamura
Affiliation at Nagoya Univ. (Dept.): Civil and Environmental Engineering



I was pleasantly surprised at how relaxed my lab was. My idea was that professors and lab culture would be very strict, but everyone in our lab was very lax, it doesn't mean they aren't hard workers. They came to the lab at their own time and stayed in the lab however they wanted, they slept, ate, prayed, studied, did research in the lab and also spent time talking to each other, just about their day, their problems or card games. I loved the lab culture in Nakamura sensei's lab. Everyone was very friendly, helping me adjust academically and socially and also teaching me some fun Japanese words! The experience in Japan was beyond my expectations, even the summer heat was not as bad (I was told that 2026 was a cooler summer compared to other years though!).

There is so much to do in Nagoya! I experienced summer festivals (Tanabata and many more pop-up festivals), Hanabi, a baseball match, kabuki, temples, Museums, zoo, aquarium, local markets, street food, and Karaoke with friends and all in Nagoya! I saw a beautiful beach (the picture is from there, the stunning beach in Koushirahama, Mie), the modernized (parts of) Osaka and the traditional Kyoto, the natural beauty of Nara and Gifu and some beautiful parts of Tokyo. All the while still achieving my research goals, the past three months were an experience that will shape me forever! I was very nervous about managing my life in a language I barely knew, but the people in Tomoko Kato san and Noriko Yoda san made the transition smooth and easy. JUACEP gave me the confidence to be able to navigate and communicate in a foreign language, to socialize and create connections with many students globally and in appreciating life and all its beauty. I made some lifelong friends here and I am endlessly grateful to JUACEP for providing this opportunity!













Findings through JUACEP



Name: Mary Bun
Affiliation at home country (Dept & Univ): Bioengineering, University of Washington
Participated program: Summer Course 2026

Research theme: Fabric Robotic Glove for Hand and Wrist Haptic Feedback in Immersive VR Table Tennis
Advisor at Nagoya Univ: Prof. Tadayoshi Aoyama
Affiliation at Nagoya Univ. (Dept.): Mechanical Systems Engineering

Participating in JUACEP was an unforgettable experience. Though I had been to Japan once before, it was only until JUACEP that I could immerse myself more in the culture and learn what it's like to live in Japan. At first, I felt nervous doing research abroad because of the language barrier. However, everyone in the Cyber Robotics Lab was incredibly friendly and accommodating and did their best to communicate with me in English. I was especially surprised to learn that one of the students, Dan Altman, had been in JUACEP last year, and enjoyed it so much that he joined the lab to work on a PhD. Hearing about Dan's experiences assured me that this program was going to be amazing. Even though I had no prior experience with Unity, C++, and Visual Studio, Prof. Yokoe and my TA, Kanamori-san, were patient and helped me ensure my research went smoothly. A big thank you to Prof. Aoyama for crafting such a welcoming lab environment.

Outside of research, I spent a lot of time exploring Nagoya. At orientation, we were given a map of over 30 cafes in the city, and I made it my personal challenge to go to every single one for ogura toast, a Nagoya specialty. This journey not only introduced me to great food, but also brought me to areas of Nagoya I would not have gone to otherwise. Having breakfast inside the Nagoya City Archives and Museum was certainly one of the highlights. I have learned to love and appreciate just how big Nagoya is, and how many amazing things there are to do here. There is still so much left to see and I would love to come back again.

I also took the time to explore other cities, especially during the week-long Obon break. The shrines in Ise, Dotonbori in Osaka, the temples in Kyoto, the deer in Nara, and the bright streets of Tokyo were all so unique and exciting. No two cities ever felt the same.

I loved getting to know the other students in my JUACEP cohort, and despite us coming from different research backgrounds, we all bonded over our love of Japanese media, food, history, and culture. Thank you everyone in JUACEP for making this truly one of the best experiences of my life.

My ogura toast ranking!







Findings through JUACEP



Name: Yuxuan Luo
Affiliation at home country: Department of Mechanical and Aerospace Engineering, New York University
Participated program: Summer Course 2026
Research theme: Resistance-Based Self-Sensing of a Pneumatic Embroidery Actuator Using Conductive Embroidery
Advisor at Nagoya Univ: Prof. Yuki Funabora
Affiliation at Nagoya Univ.: Department of Information and Communication Engineering

Participating in the JUACEP Summer Program at Nagoya University was a very meaningful experience for me, both academically and personally. During the program, I conducted research in the Doki Laboratory under the supervision of Prof. Yuki Funabora. My project focused on developing a resistance-based self-sensing method for a pneumatic Embroidery Actuator using conductive embroidery.

Through this research, I gained valuable experience in experimental design, sensing, data collection, and analysis. I also had the opportunity to work with many helpful lab members and learned a lot from their serious and careful attitude toward research. The project gave me greater confidence in carrying out an independent research project and strengthened my interest in robotics, soft actuators, and sensing technologies.

Outside the laboratory, I also enjoyed many memorable experiences in Japan. I visited the Minamichita Peninsula with friends and attended the fireworks festival in Toyohashi. The fireworks were extremely beautiful and spectacular, and it was one of the most unforgettable moments of my summer in Japan. I also spent two days traveling in Tokyo, which allowed me to experience a different side of Japan outside Nagoya.

Living in Japan for more than two months gave me the chance to experience Japanese culture, university life, and daily life more deeply. I was also very happy to meet many new friends during the program and share these experiences with them.

The JUACEP program was not only an important research opportunity, but also a very special life experience for me. It broadened my academic interests, gave me new perspectives on future study and research, and left me with many wonderful memories of Nagoya and Japan.











Findings Through JUACEP



Name: Tulluri Sai Sriya
Affiliation at home country (Dept & Univ): Mechanical and Aerospace Department, Master's in Mechatronics and Robotics, New York University
Participated in program: Summer Course 2026(JUACEP)

Research theme: Identifying and Addressing Safety Gaps in VLA-Based Wheelchair Navigation
Advisor at Nagoya Univ: Prof.Hiroyuki Okuda
Affiliation at Nagoya Univ. (Dept.): Prof.Hiroyuki Okuda

Being selected for JUACEP has been one of the most meaningful experiences of my life so far, and I feel incredibly fortunate to have had this opportunity at Nagoya University.

From the very first days, what struck me most was the warmth of the people here. Everyone I met — from professors to lab mates to people on the street — was humble, kind, and genuinely willing to help, even across language barriers. Tomoko Kato and Noriko Yoda, in particular, went above and beyond throughout the program, always friendly and supportive; I deeply appreciate the care and warmth they showed us. My professor and TA were equally generous with their time and guidance, patiently helping me navigate a challenging research project from start to finish. The friends I made here are some of the most mature, genuine, and good-hearted people I've known, and I know I'll stay in touch with them long after this program ends.

On the research side, this program gave me real, hands-on experience with ROS2 and robotics systems — skills I had never worked with before. I learned to debug complex real-world systems, integrate hardware and software, and problem-solve independently in ways that textbook learning never could have taught me. This practical, self-driven experience has given me genuine work experience that I know will directly benefit my career going forward.

Beyond the lab, Japan itself exceeded every expectation. I was able to visit many of the country's major attractions — beautiful temples, lush greenery, Atsuta Jingu, Tokyo, Kyoto, Osaka and Mt. Fuji, which graced us with a clear view on a lucky day. Nagoya Aquarium was an absolute highlight, and the zoo was wonderful too. The JUACEP excursions were unforgettable, especially the Toyota Museum, which was fascinating and educational, and the hands-on workshop where we built our own engine — it was fun and really cool to try.

I was continually impressed by Japan's cleanliness and discipline; it's something I deeply admire and hope to carry with me. Everyday conveniences, like how efficient and accessible places such as 7-Eleven are, made daily life wonderfully smooth. I also really admired how people here take pride in their mother tongue and prefer speaking it — it reflects a beautiful sense of cultural identity that I found inspiring.

The facilities and support provided throughout the program — from the dormitory to the day-to-day assistance — were excellent, and I always felt genuinely well taken care of. I didn't eat out much, mainly because vegan options are quite rare to find in Japan — though I did try vegan ramen, which turned out to be absolutely delicious.

Looking back, JUACEP has given me far more than technical skills — it has given me confidence, independence, and a broader worldview. I will deeply miss the people I met and the country that welcomed me so warmly. I'm truly grateful for this opportunity and excited to carry everything I've learned, both technically and personally, into my future career.

Building a Haptic Robot and a Research Direction through JUACEP

Name: Shengxiang Jia
Affiliation at home country (Dept. & Univ.): Department of Mechanical and Aerospace Engineering, New York University
Participated program: JUACEP Summer Course 2026

Research theme: Development and Experimental Validation of a QDD-Based Haptic Robot Arm for Remote Palpation
Advisors at Nagoya Univ.: Assoc. Prof. Akira Heya and Project Assist. Prof. Takayuki Miyamoto
Affiliation at Nagoya Univ. (Dept.): Mechanical Dynamics Laboratory, Graduate School of Engineering



The 3-DOF QDD haptic robot arm developed and validated during the program.

JUACEP gave me the opportunity to move from studying control concepts to building and validating a real haptic robot. In the Mechanical Dynamics Laboratory, I worked on a three-degree-of-freedom quasi-direct-drive arm for remote palpation. I identified the motor dynamics, modeled direction-dependent friction, and implemented impedance and transparency control using disturbance and reaction-force observers.

The project taught me how mechanical design, control theory, embedded programming, and experiments must be developed together. The measured stiffness closely followed the commanded values, and transparency control reduced free-motion resistive torque by 65.8%. Just as importantly, my advisors and lab mates helped me debug hardware, interpret unexpected results, and communicate the work clearly. Their patient and rigorous approach made the laboratory a very supportive place to learn.

Lectures, field trips, and daily life in Nagoya also helped me understand Japanese research culture. I especially appreciated the attention to preparation, safety, teamwork, and continuous improvement. Interacting with students from different backgrounds made the experience both academically valuable and personally memorable.

This program strengthened my interest in research in Japan and showed me how this project could grow into a publication and future doctoral work. I hope to continue with Cartesian stiffness validation, gravity compensation, improved reaction-force estimation, and data-driven residual compensation. JUACEP gave me stronger technical confidence, a clearer research direction, and professional relationships that I hope to maintain well beyond the summer.

Findings through JUACEP



Name: Milka Vincentiya
Affiliation at home country (Dept & Univ):
Center for Urban Study + Progress, New York University (NYU)
Participated program: Summer Course 2026
Research theme: A Grid-Level Assessment of Terrain and Built-Environment Drivers of EV Taxi Charging Locations in Shanghai
Advisor at Nagoya Univ: Prof. Toshiyuki Yamamoto
Affiliation at Nagoya Univ. (Dept.): Civil and Environmental Engineering

「10 年後の 8 月また出会えるのを信じて」Ever since my first trip to Japan, this lyric kept repeating in my head, though thankfully, I made it back way sooner than ten years! After finishing my first year of master's study in New York, coming back to Japan felt like returning to a familiar place. Still, daily life had its moments. Even though I could understand and reply in Japanese, constantly processing and speaking in a non-native language all day was just mentally exhausting! Running into people from back home and hanging out with other exchange students gave me the perfect chance to balance everything.

My research definitely didn't go strictly according to plan. Changing my topic just two weeks into the program was stressful at first, but it actually turned out to be a blessing in disguise. Whenever I needed a brain break from my data, I used it as an excuse to step outside and explore Nagoya. It might seem like a quieter city on the surface, but every walk led to cozy local spots, beautiful neighborhood streets, and even some surprising scenic views!

What also made my time here so special was the people. My TA and labmates were super welcoming, always making sure I felt included in lab events and discussions. Meanwhile, my fellow exchange program participants and I bonded over endless food runs—I said "yes" to practically every meal offer, to the point where I think I ate enough Japanese food to last a lifetime! Beyond all the spatial models and coding, this program gave me amazing friends, unforgettable memories, and a new perspective on life that I'll carry long past August.











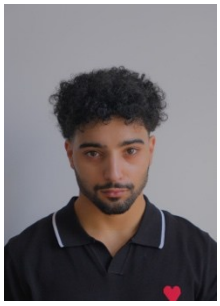


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Findings through JUACEP　A Summer of Receptor Engineering in Nagoya



Name: Arslan Elgouri
Affiliation at home country (Dept & Univ): Polytechnique Montréal, Master's in biomedical engineering
Participated program: Summer Course 2026
Research theme: structure-based engineering of the adenosine A2A receptor
Advisor at Nagoya Univ: Prof. Shigeki Kiyonaka
Affiliation at Nagoya Univ. (Dept.): Biomolecular Engineering

Research/Lab

Prof.Kiyonaka Lab works on coordination chemogenetics, a platform for engineering GPCRs to respond with enhanced sensitivity to designer molecules while retaining normal responses to endogenous ligands.

The Kiyonaka lab welcomed me warmly from day one, even across the language barrier. Lab mates generously shared technical guidance and included me in both academic and social activities. What struck me most was the collective sense of purpose, with everyone understanding what their colleagues were doing and why. This helped me better understand my own project within a broader scientific context. In addition, Nagoya University's excellent facilities and frequent research seminars expanded my perspective on GPCR biology, chemical biology, and structural pharmacology.

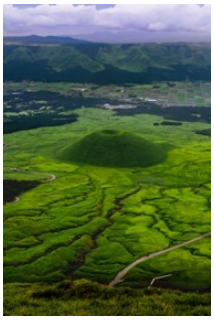


Lectures & Japanese Classes

JUACEP included weekly seminars, lab meetings, and a final symposium at which all participants presented their work. Preparing a short talk on my E169 project and explaining GPCRs and chemogenetics to a mixed-discipline audience was both challenging and rewarding. Another highlight was the bi-weekly Japanese language classes, where learning to read, write, and speak Japanese alongside other exchange students was both practically useful and enriching. The skills I gained were immediately applicable in daily life and in the laboratory, adding an unexpected layer of immersion to the summer.

Excursions

Nagoya's convenient location and Japan's extensive transportation network allowed me to explore many regions of the country during weekends and holidays. Highlights included visiting Kyoto, Osaka, Shikoku, Okinawa, and Kyushu, as well as Inuyama Castle. Experiencing Japan's diverse landscapes, history, and regional cultures greatly enriched my time outside the laboratory.





Life in Nagoya/Cultural Differences

Living in Nagoya for ten weeks provided a truly immersive experience of Japanese culture and research. The city's welcoming atmosphere, excellent food, and convenient transportation made daily life enjoyable, while the lab's emphasis on precision, careful documentation, and teamwork shaped my approach to science. Adapting to Japan's collaborative and indirect communication style helped me become a more thoughtful and attentive researcher.

Impact on My Career

Scientifically, I gained expertise in receptor engineering, construction PCR, Ca^{2+} mobilization assays, and cAMP reporter systems, while developing a new perspective on GPCRs as molecular machines whose pharmacology can be re-engineered. Professionally, working in a world-class Japanese laboratory reinforced the value of careful thinking, honest data, and long-term commitment to a question. I leave with valuable connections, new skills, and a higher standard for experimental care that will shape my future research.



Findings through JUACEP

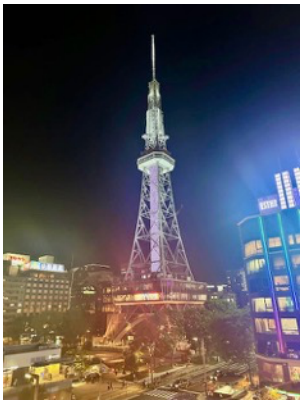


Name: Fatemeh Rostamian
Affiliation at home country: Computer Engineering/ Polytechnique Montreal
Participated program: Summer Course 2026
Research theme: Intelligent transportation system
Advisor at Nagoya Univ: Professor T. Yamazato
Affiliation at Nagoya Univ.: Information and Communication Engineering

My participation in the JUACEP Summer Course 2026 at Nagoya University has been an exceptionally enriching academic and personal journey. Conducting research on Intelligent Transportation Systems (ITS) under the guidance of Prof. T. Yamazato at the Department of Information and Communication Engineering provided me with unique insights into state-of-the-art communication technologies and system design. The laboratory environment was incredibly welcoming and intellectually stimulating; my lab mates were always supportive, fostering smooth technical discussions and collaborative learning that bridged academic and cultural perspectives seamlessly.

Beyond the academic domain, living in Nagoya and experiencing Japanese daily life left an unforgettable impression. The well-organized excursions, hands-on activities, and exposure to Japanese engineering culture highlighted remarkable precision and innovation. Navigating the city, experiencing local traditions, and witnessing the concept of Omotenashi firsthand made this stay profoundly memorable.

This program has significantly solidified my research interests and broadened my perspective toward international collaboration. The experience gained at Nagoya University will undoubtedly shape my future career path in intelligent systems engineering, and it has strengthened my motivation to pursue academic and professional opportunities connected with Japan in the future.











Findings through JUACEP



Name: Mahsan Abdoli
Affiliation at home country: Department of Computer Engineering, Polytechnique Montreal
Participated program: Summer Course 2026

Research theme: Human computer interaction
Advisor at Nagoya Univ: Prof. Masaya Iwasaki
Affiliation at Nagoya Univ.: Graduate School of Engineering, Information and Communication Engineering

Participating in this program in Nagoya was a highly rewarding experience that allowed me to immerse myself in both intensive research and rich cultural exploration. On the academic side, I am deeply grateful for the opportunity to work alongside my supervisor and TA. Their guidance was invaluable as I advanced my research at the intersection of Human-Computer Interaction, Artificial Intelligence, Vision-language Models, and social robotics. Having the chance to execute a full project pipeline on migrating conversational agents from conceptualization and technical implementation to experiment design and analysis significantly strengthened my technical and analytical skills.

The cultural dimension of my stay was equally valuable. Living and working in Japan over the past ten weeks allowed me to observe the underlying subtleties of Japanese culture firsthand, in both professional environments and daily life. I grew to love Japan's natural landscapes and completely fell in love with the railway system and train stations during weekend day trips with my cohort. During my stay, I had the opportunity to explore regions near Nagoya alongside visits to Tokyo, Kyoto, Osaka, Nara, and Kamakura.

Overall, this experience not only propelled my research forward but also gave me cultural insights, cherished memories, and valuable connections beyond the program.

