CHANYEONG CHO

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PROFILE / SUMMARY

Robotics researcher with hands-on experience in assistive and field robotics across Korea, Japan, and the United States, aiming to develop emotionally intelligent robots that support daily living and caregiving for older adults and people with disabilities.

EDUCATION

B.S.   Mechanical Systems Engineering, Shinshu University   Nagano, Japan
Advised by Kimitoshi Yamazaki   Apr 2020 - Sep 2024

Exchange Program, California State University, Sacramento   Sacramento, CA, USA
Coursework in Robotics and Control   Aug 2022 - May 2023

RESEARCH EXPERIENCE

Sensor-Free Plug-Insertion Learning in Isaac Gym   Apr 2024 - Mar 2025
Undergraduate Researcher, Shinshu University (Advisor: Prof. Kimitoshi Yamazaki)

- Built a 7-DOF Franka arm simulation in Isaac Gym to learn plug-insertion movement through contact-based exploration without external sensors.
- Achieved an 83% success rate within 11 seconds and demonstrated adaptive, human-like motion applicable to assistive robotics for older adults and people with disabilities.

Autonomous Patrol Robot Using Unitree Go2   Apr 2025 - Sep 2025
Researcher, Shinshu University (Advisor: Asst. Prof. Tian Yang)

- Utilized Isaac Lab to study and design an autonomous patrol system for the Unitree Go2 quadruped, aimed at protecting mountain villages from wildlife intrusions such as boars.
- Conducted Sim-to-Real navigation experiments to ensure stable walking and terrain adaptation in outdoor patrol scenarios.

ADDITIONAL EXPERIENCE

Robotics Club (Alps), *Shinshu University*   Apr 2021 - Jun 2024

- Led ROS-based development of teleoperation and autonomous control modules for a robot built for Japan's NHK national robotics competition.
- Collaborated across the full engineering pipeline—from design to control—to achieve reliable integrated performance.

Interactive Multi-Robot Game with Sony's "toio" Platform   2022

- Designed and implemented a chase-and-evade game using Sony's toio cube robots, developed in collaboration with and supported by Sony to promote playful and educational interaction for children.

CITIZEN FINEDEVICE CO., LTD. (Japan), *Research Assistant Intern*   Aug 2021
- Assisted in R&D of the OpECS optical probe electric current sensor

PRESENTATIONS

ICRA 2024 – Japan's national Moonshot Goal 3 R&D Program Booth   May 2024
- Presented a dressing-assist robot featuring high-degree-of-freedom, multi-contact motion assist control with members of Prof. Yamazaki's lab.

EXPERIENCE IN THE U.S.

Robotics & Control Laboratory *(Asst. Prof. Rohollah Moghadam)*   Aug 2022 - May 2023
- Conducted advanced lab-style coursework on robot motion control and dynamic systems.

Automatic-Parking Robot Project *(Lecturer Neal F. Levine)*   Aug 2022 - Dec 2022
- Built a motion-controlled robot using MATLAB and Arduino kits.

Training: Beckhoff, Silicon Valley *(Asst. Prof. Ray Tang)*   Sep 2022 - Nov 2022
- PLC & Motion Fundamentals focusing on industrial robot-arm control systems.

AWARDS

·Panasonic Special Award, NHK All-Japan University Robotics Contest   2024
    National-level competition broadcast by NHK
·NOK Special Award, NHK All-Japan University Robotics Contest   2022
    Top 5 nationwide; seed team

HONORS

·Knowledge Forest Global Human Resource Development Grant (¥300,000)   2022 - 2023
    Grant to support overseas academic & research activities.
·Knowledge Forest Scholarship for International Students (¥25,000/mo)   2021 - 2022
    Awarded for academic performance.
·Japanese Government (MEXT) Honors Scholarship for International Students (¥48,000)   2021
    Awarded for academic performance.

OTHER WORKS

Care Worker (Alternative Service to Military Duty), Korea   Jun 2023 - Sep 2023
- Supported daily living and care for older adults and people with disabilities

Invited Speaker, Il GONG Education Group, Korea   Jan 2024
- Gave a public talk on academic and research experiences in Japan and the United States to encourage students interested in studying abroad.

Mentor, Faculty of Engineering, Shinshu University 2022 - 2024

Skills

・Programming

   Python, MATLAB, C++, C#, Fortran

・Software

   Isaac Gym, Isaac Lab, ROS, SolidWorks, MuJoCo, Gazebo, Blender, Unity

・Languages

   Korean (Native), English, Japanese

REFERENCES

・Professor. Kimitoshi Yamazaki   E-mail: kimitoshi.yamazaki.c5@tohoku.ac.jp

   Department of Robotics, Graduate School of Engineering, Tohoku University, Japan

・Associate Professor. Tian Yang   E-mail: tian@shinshu-u.ac.jp

   Graduate School of Science and Technology, Shinshu University, Japan

・Associate Professor. Rohollah (Roham) Moghadam   E-mail: moghadam@csus.edu

   Department of Electrical Engineering, California State University, Sacramento

・Lecturer. Neal Frederick Levine   E-mail: neal.levine@csus.edu

   Department of Electrical Engineering, California State University, Sacramento

・Associate Professor. Hong-Yue (Ray) Tang   E-mail: tangh@ecs.csus.edu

   Department of Mechanical Engineering, California State University, Sacramento