YOUNGHYO PARK

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Education

Massachusetts Institute of Technology   **Sep. 2023 – Present**

Ph.D. in Electrical Engineering and Computer Science   Cambridge, USA

Seoul National University   **Mar. 2016 – Aug. 2022***

B.S. in Department of Mechanical Engineering, Total GPA 4.25/4.3 (Major GPA 4.26/4.3)   Seoul, South Korea

Graduated Summa cum laude, 1st place in Mechanical Engineering Department.

* Served mandatory military service between 2018-2019

Publications

- Sunin Kim*, Jaewoon Kwon*, Taeyoon Lee*, **Younghyo Park*** and Julien Perez. *Safety-Aware Unsupervised Skill Discovery*, International Conference on Robotics and Automation (ICRA), 2023 * Equal Contribution, listed in alphabetical order.

- **Younghyo Park***, Seunghoon Jeon* and Taeyoon Lee. *Robot Learning to Paint from Demonstrations*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2022 * Equal Contribution
  (Best Paper Winner: Best Entertainment and Aumsement Paper)

- **Younghyo Park**, Joonwoo Ahn and Jeaheung Park. *Deep Learning based Parking Slot Detection and Tracking: PSDT-Net*, IEEE International Conference on Robot Intelligence Technology and Applications (RITA), 2021

- Kyumin Park, **Younghyo Park**, Sangwoong Yoon and Frank C. Park. *Collision Detection for Robot Manipulators Using Unsupervised Anomaly Detection Algorithms*, IEEE/ASME Transactions on Mechatronics, 2021

Experience

Improbable AI Lab **Ph.D. Student**   **Sep. 2023 - Present**
- Advisor: Professor Pulkit Agrawal

NAVER LABS **Full-time Robotics Engineer**   **Mar. 2022 - Jul. 2023**
- Researched and developed unsupervised skill discovery algorithms for various manipulation tasks.

NAVER LABS **Research Intern**   **Sep. 2021 - Feb. 2022**
- Developed a robot that can learn how to paint from human demonstrations.
- The robot, named ARTO-1, is being exhibited in NAVER HQ located in South Korea.

Dynamic Robotics Systems Lab **Research Intern**   **Jul. 2021 - Aug. 2021**
- Developed parking spot detection algorithm for autonomous vehicle parking system that accurately estimates the position and orientation of parking spots before and during the parking.
- Funded Summar Internship Program by [Artificial Intelligence Instututie SNU (AIIS)]

SNU Robotics Laboratory **Research Intern**   **Sep. 2020 - Jan. 2021**
- Developed unsupervised robot collision detection algorithm using deep autoencoder network.
- Compared to existing robot collision detection works which mostly rely on supervised learning, our unsupervised algorithm achieved high detection performance with less computation.

Saige Research **Research Intern**   **Jun. 2020 - Feb. 2021**
- Researched and developed out-of-distribution detection algorithm for industrial defect images. (e.g. PCB, battery)
- Reproduced/tested various state-of-the-art out-of-distribution detection algorithms.

Skills

Programming Languages: Python, MATLAB
Libraries/Frameworks: PyTorch, NVIDIA Isaac Gym/Sim, MuJoCo, ROS2
Languages: Korean (native), English

English Proficiency

TOEFL: 114/120 (Reading 30/30, Listening 30/30, Speaking 26/30, Writing 28/30)
GRE: Verbal Reasoing 164/170, Quantitative Reasoning 170/170, Analytical Writing 4.0/5.0

Teaching Experience

Introduction to Robotics, Dynamics, Fluid Dynamics | *Undergraduate Tutoring*   **Sep. 2020 - Feb. 2021**
Solid Mechanics | *Undergraduate Tutoring*   **Mar. 2020 - Jul. 2020**

Scholarship

Kwanjeong Overseas Fellowship   **Sep 2023 – Present**
5-year additional stipend support for Ph.D. studies
Meryll Lynch Fellowship   **Sep 2023 – Jun 2024**
1-year Full Tuition and Stipend
National Science & Technology Scholarship   **Mar 2016 – Aug 2022**
4-year Full Tuition