Joonhyung Lee

Co-Founder, AI Research Engineer

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Work Experience

ATLO   *Seoul, S.Korea*
Co-Founder   *Dec. 2024 – now*
- Intersection of robotics and machine learning

Education

Korea University   *Seoul, S.Korea*
Master of Science in Artificial Intelligence   *Sep. 2022 - Aug. 2024*
- Supervisor: Sungjoon Choi
- Cumulative GPA: 4.14 / 4.50

Korea University   *Seoul, S.Korea*
Bachelor of Science in Electro-Mechanical Systems and Engineering   *Mar. 2018 - Feb. 2022*
- Cumulative GPA: 4.13 / 4.50, Major GPA: 4.31 / 4.50, Credit: 146
- Summa Cum Laude, Ranking: 2/88

Publications

SPOTS: Stable Placement of Objects with Reasoning in Semi-Autonomous Teleoperation Systems   *ICRA*
Joonhyung Lee, Sangbeom Park, Jeongeun Park, Kyungjae Lee, and Sungjoon Choi   *2024*
- *Project Page* | *Code* | *Paper* | *Video* | *Talk (15 min)*

Visual Preference Inference: An Image Sequence-Based Preference Reasoning in Tabletop Object Manipulation   *IROS*
Joonhyung Lee, Sangbeom Park, Yongin Kwon, Jemin Lee, Sungjoon Choi   *2024*
- *Project Page* | *Code* | *Paper* | *Video* | *Talk (10 min)* | *Poster*

Quality-Diversity based Semi-Autonomous Teleoperation using Reinforcement Learning   *Neural Networks*
Sangbeom Park, Taerim Yoon, Joonhyung Lee, Sunghyun Park, and Sungjoon Choi   *2024*
- *Project Page* | *Paper* | *Video* | *Poster*

CLARA: classifying and disambiguating user commands for reliable interactive robotic agents   *RA-L*
Jeongeun Park, Seungwon Lim, Joonhyung Lee, Sangbeom Park, Minsuk Chang, Youngjae Yu, and Sungjoon Choi   *2024*
- *Project Page* | *Paper* | *Video*

Robust Detection for Autonomous Elevator Boarding Using a Mobile Manipulator   *ACPR*
Seungyoun Shin, Joonhyung Lee, Junhyug Noh, and Sungjoon Choi   *2023*
- *Project Page* | *Paper* | *Video*

Skills

Programming	Python, C++
Physics Simulation	MuJoCo, Isaac Sim, ROS2, PyTorch
Realworld Robots	UR5e, Franka Panda, GAEMI, DJI F450 Drone
DevOps	AWS, Docker, Google Cloud Platform
Languages	Korean (Native), English (Intermediate)

Highly motivated with a strong ability to learn quickly and adapt to new challenges.

Presentation

Conference Paper & Poster Presentations   *ICRA & IROS*
Presentation for three papers   *2024*
ICRA: 1 Paper presentation (Oral), 3 Poster presentations
IROS: 1 Paper presentation

Patent

2024	**10-2024-0023216**, Visual Preference Inference: An Image Sequence-Based Preference Reasoning in Tabletop Object Manipulation	*Korea*

Honors & Awards

2022	**Scholarship for Admission Excellence (Half-Funding),** Korea University	*Seoul, S.Korea*
2021	**Silver Prize,** Graduation Project Competition, Korea University	*Seoul, S.Korea*
2020	**Gold Prize,** Engineering School Student Academic Conference, Korea University	*Seoul, S.Korea*
2020	**Silver Prize,** Engineering School Student Academic Conference, Korea University	*Seoul, S.Korea*
2019-2022	**Dean's List**, Korea University	*Seoul, S.Korea*
2019-2022	**Best Tutor Award,** Statics, Electric Circuit, Control Engineering, Korea University	*Seoul, S.Korea*
2018-2022	**Scholarship for Academic Excellence (Full-Funding),** Korea University	*Seoul, S.Korea*

Extracurricular Activity

PoApper (Developers' Network of POSTECH) *Pohang, S.Korea*
CORE MEMBER & PRESIDENT AT 2013 *Jun. 2010 - Jun. 2017*

- Reformed the society focusing on software engineering and building network on and off campus.
- Proposed various marketing and network activities to raise awareness.

PLUS (Laboratory for UNIX Security in POSTECH) *Pohang, S.Korea*
MEMBER *Sep. 2010 - Oct. 2011*

- Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.
- Participated on several hacking competition and won a good award.
- Conducted periodic security checks on overall IT system as a member of POSTECH CERT.
- Conducted penetration testing commissioned by national agency and corporation.