

Education & Affiliations

- University of Maryland, College Park** MD, USA
Ph.D. Student, Department of Computer Science
 Advisor: Prof. Furong Huang and Prof. Jia-Bin Huang
 Aug. 2024 - Present
- New York University** NY, USA
Researcher, CILVR Lab at NYU
 Advisor: Prof. Lerrel Pinto
 (remote) Jul. 2023 - Mar. 2024
 (in-person) Apr. 2024 - Jun. 2024
- Seoul National University** Seoul, Korea
M.S., Department of Aerospace Engineering
 Advisor: Prof. H. Jin Kim
 Mar. 2021 - Feb. 2024
- Seoul National University** Seoul, Korea
B.S., Department of Mechanical and Aerospace Engineering
 GPA: 3.99 (Major: 4.09)/4.30 (11th out of 144 graduating students)
 Mar. 2015 - Feb. 2021
 military service (2 years)
- Daegu Science High School** Daegu, Korea
 Science high school for gifted students in science and mathematics
 Mar. 2012 - Feb. 2015

Publications (* Equal Contribution) [Publications URL: sjlee.cc]

- Robot Utility Models: General Policies for Zero-Shot Deployment in New Environments
*Haritheja Etukuru, Norihito Naka, Zijin Hu, **Seungjae Lee**, Julian Mehu, Aaron Edsinger, Chris Paxton, Soumith Chintala, Lerrel Pinto, Nur Muhammad Mahi Shafiullah*
Preprint
- Behavior Generation with Latent Actions
Seungjae Lee, Yibin Wang, Haritheja Etukuru, H. Jin Kim, Nur Muhammad Mahi Shafiullah, Lerrel Pinto
International Conference on Machine Learning, 2024
[\[Spotlight\]](#)
ICML'24
- CQM: Curriculum Reinforcement Learning with a Quantized World Model
Seungjae Lee, Daesol Cho, Jonghae Park, H. Jin Kim
Conference on Neural Information Processing Systems, 2023
NeurIPS'23
- Diversify Conquer: Outcome-directed Curriculum RL via Out-of-Distribution Disagreement
 Daesol Cho, **Seungjae Lee**, H. Jin Kim
Conference on Neural Information Processing Systems, 2023
NeurIPS'23
- SNeRL: Semantic-aware Neural Radiance Fields for Reinforcement Learning
 Dongseok Shim*, **Seungjae Lee***, H. Jin Kim
International Conference on Machine Learning, 2023
ICML'23
- Outcome-directed Reinforcement Learning by Uncertainty & Temporal Distance-Aware Curriculum Goal Generation
 Daesol Cho*, **Seungjae Lee***, H. Jin Kim
International Conference on Learning Representations, 2023
[\[Spotlight\]](#)
ICLR'23
- Deep End-to-End Imitation Learning for Missile Guidance with Infrared Images
Seungjae Lee, Jongho Shin, Hyeong-Geun Kim, Daesol Cho, H. Jin Kim
International Journal of Control, Automation and Systems, 2023
IJCAS'23
- DHRL: A Graph-Based Approach for Long-Horizon and Sparse Hierarchical Reinforcement Learning
Seungjae Lee, Jigang Kim, Inkyu Jang, H. Jin Kim
Conference on Neural Information Processing Systems, 2022
[\[Oral\]](#)
NeurIPS'22

- Robust and Recursively Feasible Real-Time Trajectory Planning in Unknown Environments

*Inkyu Jang, Dongjae Lee, **Seungjae Lee**, H. Jin Kim*

IEEE/RSJ International Conference on Intelligent Robots and Systems, 2021

IROS'21

Projects

- **LeRobot Project by Hugging Face**
Implement VQ-BeT policy part of the LeRobot project May. 2024 - Jul. 2024
- **Vector-Quantized Behavior Transformer for Multi-Modal Demonstrations**
Co-work with Generalizable Robotics and AI Lab (Prof. Lerrel Pinto) at New York University Jul. 2023 - Jun. 2024
- **Training Excavator Virtual Driver based on Inverse RL**
Co-work with with HD Hyundai Heavy Industries Co., Ltd. Apr. 2023 - Apr. 2024
- **End-to-End Machine Learning Based Guidance Research**
Co-work with the Agency for Defense Development (National Research Institute of Korea) May. 2021 - Apr. 2023

Teaching / Work Experience

- **AI Technical Coach, Teen Startup Team**
AI Music & Gallery Team, Applied Computing Foundation Jun. 2023 - Jan 2024
- **Teaching Assistant, 2023 Hyundai Motor Company AI Boosting Camp**
Innovation Center for Engineering Education, Seoul National University Aug. 2023
- **Teaching Assistant, Principles of Flight Vehicle Control (M2795.002600)**
Department of Aerospace Engineering, Seoul National University Spring 2021
- **Talent Internship Program, Samsung Electronics Co., Ltd.**
Deep Learning Algorithm Team, Device Solutions (DS) Jul. 2020 - Aug. 2020
- **Mentor & Camp Leader, Dream Consultant (NPO)**
Non-Profit Organization (NPO) for Social Contribution in Seoul Jul. 2016 - Sep. 2020
- **Tutor, Basic Physics 1 (034.005), Basic Physics 2 (034.006)**
Faculty of Liberal Education, Seoul National University Fall 2016, Spring 2019, Fall 2019

Scholarships

- (Scholarship) Dashin Songchon Scholarship Foundation (USD100,000/year) Aug. 2024 - Present
- (Scholarship) Hyundai Motor Chung Mong-Koo Foundation (Tuition+KRW3,600K/year) Sep. 2021 - Jun. 2023
- (Scholarship) OK Bae&Jung Scholarship Foundation (KRW6,000K/year) Mar. 2020 - Feb. 2021

Awards / Achievements / Invited talks

- (Invited Talk) LG tech talk, LG AI Research Aug. 2023
- (Awards) Global Excellence Scholarship 2023, Hyundai Motor Chung Mong-Koo Foundation Jun. 2023
- (Awards) Top Prize at SNU AI Institute Spring Retreat Best Poster Competition May. 2023
- (Awards) Global Excellence Scholarship 2022, Hyundai Motor Chung Mong-Koo Foundation Dec. 2022
- (Awards) NeurIPS Scholar Award Dec. 2022
- (Awards) Brain Korea 21 (BK21) Aerospace Excellence Research Award Feb. 2022
- (Awards) Graduated Summa Cum Laude, Seoul National University Feb. 2021

Academic Services

- Program Committee, RSS'24 SemRob Workshop
- Conference reviewer for ICML'22'24
- Conference reviewer for IROS'23
- Conference reviewer for NeurIPS'23
- Conference reviewer for ICLR'24
- Conference reviewer for ICRA'24