

# Hyunjoon Lee

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Seoul National University, Seoul 08826, Republic of Korea

## EDUCATION

### • Integrated M.S./Ph.D. in Artificial Intelligence

*Seoul National University*

*Mar. 2024 - Present*

Seoul, Korea

◦ Advisor: Jaesik Park

◦ GPA: 4.08/4.3

### • B.E. in Mechanical Engineering

*Sungkyunkwan University*

*Mar. 2018 - Feb. 2024*

Suwon, Korea

◦ GPA: 4.39/4.5

◦ *Summa Cum Laude (1/131)*

## RESEARCH INTERESTS

• 3D Vision

• Feature Fields

• Robotics

## EXPERIENCES

### • Research intern

*Jun. 2023 - Sep. 2023*

Seoul, Korea

*HuGe Lab, KAIST AI*

◦ Advisor: Beomjoon Kim

◦ Developed a model to predict 6 DoF grasp poses using a depth sensor

### • Research intern

*Jan. 2023 - Jun. 2023*

Suwon, Korea

*CSI Lab, SKKU*

◦ Advisor: Yusung Kim

◦ Developed an RL agent using the PPO algorithm and transformer architecture

### • Research intern

*Dec. 2019 - Mar. 2020*

Suwon, Korea

*CAMAS Lab, SKKU*

◦ Advisor: Jachoon Koo

◦ Developed a mathematical model to elucidate the stiffness mechanism of the soft gripper

## PUBLICATIONS

- **Hyunjoon Lee\***, Eunsung Cha\*, Jaesik Park, Introduces a training-free hierarchical clustering framework for open-vocabulary 3D Gaussian segmentation, unifying instance-level coherence and query flexibility via an efficient digraph-based formulation without per-scene optimization., **Under Review**, 2026
- Jinmo Kim, Namtae Kim, **Hyunjoon Lee**, Seungha Kim, Jaesik Park, a feed-forward multi-view 3D reconstruction framework that explicitly reasons about occlusions by reconstructing missing latent tokens across views, enabling fast and consistent amodal shape completion without generative inpainting., **Under Review**, 2026
- **Hyunjoon Lee**, Joonkyu Min, Jaesik Park, *CF3: Compact and Fast 3D Feature Fields*, Int. Conf. on Computer Vision (ICCV), Main Conference & Demonstrations Track, 2025
- **Hyunjoon Lee**, Joonkyu Min, Jaesik Park, *Efficient Feature Lifting and Compression Using Pre-trained 3D Gaussians*, Korea Computer Congress (**KCC-Domestic**), 2025

## **AWARDS AND HONORS**

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- **Honorable Mention**, Research Paper Competition, Seoul National University, Korea (Dec. 2025)
- **Outstanding Paper Presentation Award**, "Efficient Feature Lifting and Compression Using Pre-trained 3D Gaussians", Korea Computer Congress, Korea (Aug. 2025)
- **Invited Talks**, "CF3:Compact and Fast 3D Feature Fields" SNU Graduate of AI Research Exchange, Seoul National University, Korea (Jun. 2025)
- **Outstanding Award at the demo competition**, Seoul National University, Korea (Jun. 2025)
- **Invited Talks**, "CF3:Compact and Fast 3D Feature Fields", NaverLabs, Korea (Mar. 2025)
- **Dean's List Award**, SungKyunKwan University(SKKU), Korea (May. 2021)
- **Scholarship for academic excellent**, SungKyunKwan University(SKKU), Korea (Mar. 2021)
- **Dean's List Award**, SungKyunKwan University(SKKU), Korea (Oct. 2020)
- **Scholarship for research excellent**, SungKyunKwan University(SKKU), Korea (Mar. 2020)
- **Scholarship for academic excellent**, SungKyunKwan University(SKKU), Korea (Mar. 2019)
- **Scholarship for academic excellent**, SungKyunKwan University(SKKU), Korea (Sep. 2018)

## **PROJECTS**

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- Building a RAG-based interactive 3D car live video service using CF3, Kolon Motors, Korea (Sep. 2025 - Dec. 2025)
- Developing an end-to-end model for reconstructing complex scenes in 3D to enhance robotic perception capabilities, Hyundai Motors, Korea (Mar. 2025 - Mar. 2026)
- Robust Pick and Place, LG Electronics, Korea (Jun. 2023 - Sep. 2023)
- Development of existing radio station protection and frequency sharing technology through spectrum challenge, Institute of Information & Communications Technology Planning & Evaluation, Korea (Jan. 2023 - Jun. 2023)
- Design of two stage reducer, SKKU, Korea (Mar. 2020 - Jun. 2020)

## **PATENT**

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- CF3: Compact and Fast 3D Feature Fields, 10-2025-0093174

## **SKILLS AND TECHNIQUES**

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- Pytorch/Python/Numpy/Issac gym/Pybullet
- Matlab/Inventor(3D CAD)/Ansys/Abaqus

## **TEACHER ASSISTANT**

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- **Samsung Electronics DS Cooperation Course**, Samsung Electornics (Aug. 2025)
- **Introduction to Artificial Intelligence**, Seoul National University (2025 Spring)
- **Samsung Electronics DS Cooperation Course**, Samsung Electornics (Aug. 2024 - Oct. 2024)
- **Introduction to Artificial Intelligence**, Seoul National University (2024 Spring)