

Chanyoung Lee

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Introduction

Master's student in Automotive Engineering at Hanyang University. Interested in **end-to-end (E2E) autonomous driving**, with a focus on **Vision AI** for perception, mapping, and intelligent driving systems. Experienced in computer vision, LiDAR perception, multi-object tracking, ROS/ROS2-based integration, and embedded AI deployment.

Education

M.S. in Automotive Engineering **2026.03 – Present**
Hanyang University, IRCV Lab (Intelligent Robotics & Computer Vision Lab)

B.S. in Interdisciplinary Computing Technology **2019.03 – 2024.08**
(Double Major in Computer Science)
Hanyang University ERICA

- GPA: 4.11 / 4.50 Major GPA: 4.16 / 4.50

Experience

Vision AI Research Intern, DeepAI Team **2025.04 – 2025.12**
Kakao Mobility — Seongnam, South Korea

- Developed Vision AI projects for parking solutions, including data labeling and inspection, OCR, object detection, and multi-camera multi-object tracking.

Perception Engineer Intern, Autonomous Driving Team **2024.10 – 2025.01**
Vueron Technology — Seoul, South Korea

- Developed LiDAR-based perception software for parsing, segmentation, clustering, and rule-based detection.

Student Trainee, H-Mobility Class **2024.03 – 2024.07**
Hyundai Motor Group — Seoul, South Korea

- Studied the autonomous driving pipeline, including perception, planning, control, and communication.
- Participated in hands-on autonomous vehicle project work with Python-based implementation.

Projects

Vision AI Solution for Parking Lots

Object detection, OCR, tracking, and edge optimization for parking payment systems.

- Developed object detection and OCR pipelines for parking payment workflows.
- Optimized models for **Jetson** and **Hailo** devices (GPU and NPU).
- Applied multi-object tracking to parking lot scenarios.

3D Pedestrian Detection Using LiDAR

LiDAR parsing and a rule-based 3D pedestrian detection pipeline.

- Parsed LiDAR data from Ouster and Hesai sensors.
- Performed segmentation, clustering, and shape estimation.
- Generated 3D bounding boxes and pedestrian detection software.

H-Mobility Class Autonomous Driving Project

Perception, ROS2 integration, and vehicle control.

- Collected and trained YOLO datasets for perception improvement.
- Developed decision-making and control logic for autonomous driving.

Real-Time Digital Twin with KT Group

Detection, tracking, data pipelines, and Unity-based simulation.

- Developed and tested open-source object detection and tracking models.

- Built a data communication pipeline for object coordinates.
- Implemented simulation and visualization in Unity.

MultiMNIST Classification and Age Regression

Undergraduate research project in the Vision & Machine Learning Lab.

- Trained deep learning models with PyTorch.
- Performed parameter tuning, performance improvement, dataset development, and paper review.

Self-Driving Car Cone-Keeping Assistance System

Sensor fusion and actuator interfacing for driving assistance.

- Implemented cone detection using YOLO.
- Performed LiDAR-camera calibration and GPS localization.
- Built a LoRa-based emergency stop system, CAN-based steering control, and ROS-based software modules.

EV3 Robot Driving

Line detection and path planning.

- Implemented C-based driving logic.
- Designed a path-planning and minimum-cost decision algorithm.

Research & Training

Vision Team Member, Deep Learning Paper Reading Club

2025.02 – 2026.02

Deep Learning Paper Reading Club

- Read, analyzed, and presented recent papers on Vision AI and multimodal learning on a weekly basis.

Kakao Tech Bootcamp, Cloud Track

2024.07 – 2024.10

Kakao, Goorm

- Completed training in software development, AI, cloud computing, Docker, CI/CD, DevOps, and deployment.
- Collaborated on team projects with participants from full-stack, AI, and cloud tracks.

Autonomous Driving Robot Expert Course (ROS2)

2024.01 – 2024.02

Kwangwoon University Engineering Education Innovation Center

- Completed a 49-hour ROS2-based autonomous robot course.
- Conducted TurtleBot projects involving SLAM and navigation.

Undergraduate Research Intern

2023.08 – 2024.02

Vision & Machine Learning Lab, Hanyang University ERICA

- Worked on deep learning model development, hyperparameter tuning, and performance analysis.

Awards

- **2nd Prize, AI Hackathon (KAMOTHON)** — Kakao Mobility (2025.12)
- **2nd Prize, ICT Convergence Capstone Design Competition** — Hanyang University (2024.05)
- **1st Prize, Engineering College Academic Festival** — Hanyang University (2023.11)
- **Best Rookie Award, University Creative Mobility Competition** — Korea Automotive Safety Association (2023.10)
- **2nd Prize, SW Startup Makerthon** — Hanyang University (2023.06)

Skills

- **Programming:** Python, C, C++, Java
- **Domains:** Computer Vision, Deep Learning, Autonomous Driving, LiDAR Perception, Multi-Object Tracking
- **Tools/Frameworks:** PyTorch, ROS/ROS2, Unity, Docker

Certifications & Test Scores

- **OPIC:** Intermediate Mid 1

- **TOEIC:** 775
- **TEPS:** 302
- **SQLD** (SQL Developer)
- **Computer Specialist in Spreadsheet & Database Level 1**

Additional Information

Military Service Completed (Republic of Korea Army)

2020.02 – 2021.09

Publications

Preparing a publications list.