

Eunchong Kim

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RESEARCH INTEREST

AI-based End-to-End Autonomous Driving & Perception Systems for Robotics

EDUCATION

Ulsan National Institute of Science and Technology (UNIST)

M.S. in Artificial Intelligence

Ulsan, Republic of Korea

Sep. 2023 - Current

- GPA: 4.05

- Advisor: Prof. Jeong hwan Jeon (Robotics and Mobility Lab.)

- Thesis: End-to-End Autonomous Driving: Deployment-Oriented and Rule-Conformant Design

Jacobs University Bremen (Currently Constructor University)

B.Sc. in Robotics and Intelligent Systems

Bremen, Germany

Sep. 2020 - Jun. 2023

- GPA: 1.52 / 1.0 (German Scale) \approx 3.5 / 4.0 (U.S. GPA)

- Advisor: Prof. Francesco Maurelli

- Thesis: Event-Based Motion Segmentation and Stereo Feature Matching in Highly Cluttered Environments (Collaborative research with WasteAnt GmbH)

- Major Representative

- Merit-based Scholarship (€5,000 per year)

PUBLICATIONS

First author. "Deployment-Oriented End-to-End Autonomous Driving: Enhancing Closed-Loop Stability with a Lightweight Camera-Only Framework", Submitted to 2026 IEEE Intelligent Vehicles Symposium (Under Review).

First author. "Rule-Conformant End-to-End Autonomous Driving: Safer Intersection Behavior via Enforced Cue Representation", Submitted to 2026 IEEE Intelligent Vehicles Symposium (Under Review).

PROJECTS

2025 Hyundai Motor Group Autonomous Driving Challenge

Oct. 2024 - Sep. 2025

1st Round: 3rd place (#5M Reward)

2nd Round: 1st place (Team leader) (#30M Reward, Recruitment perks, China Tech Tour)

- Developed a deployment-oriented End-to-End AD model, prioritizing closed-loop performance.
- Utilized DAgger to enhance model robustness in Out-of-Distribution scenarios, resolving the covariate shift issue in imitation learning.
- Achieved 16Hz inference speed on NVIDIA Jetson AGX Orin.

BEV-based Lane Detection for ERP42

Dec. 2023 - Feb. 2024

- Developed and validated a lane detection framework using conventional computer vision techniques for ERP42 in UNIST.

Multi-Teacher Knowledge Distillation based Pedestrian Detection Aug. 2023 – Dec. 2023

- Collected and labeled a custom dataset using pseudo-labeling techniques to maximize data efficiency and minimize labeling cost.
- Developed a real-time pedestrian detection model using MTKD, improving detection accuracy (over 16% mAP gain) compared to the fine-tuned model.

Truck-Discharging Waste Segmentation using Event Camera Data Jan. 2023 – Jun. 2023

- Developed an event-based motion segmentation algorithm for the precise detection of anomalous waste in incineration plant environments.
- Implemented Event-RGB stereo matching techniques for robust 3D perception.

Event-based Vehicle Tracking in Highway Surveillance System Jun. 2022 – Aug. 2022

- Developed a low-cost vehicle tracking algorithm (clustering and event-seeking based) for highway surveillance systems using an event camera for high efficiency.

DuckieTown Project Feb. 2022 – May. 2022

- Developed lane and object detection framework (Fine-tuning on custom dataset).

AWARDS**Excellence Award | AI Tech Open Workshop (AI Graduate School)** Apr. 2025 – Sep. 2025

- Project Title: Development of an End-to-End Autonomous Driving Framework Using a High-Fidelity Simulator.
- ₩ 2,500,000 Reward

ACADEMIC EXPERIENCE**Reviewer | 2026 IEEE Intelligent Vehicles Symposium (IV)** Nov. 2025**WORK & TEACHING EXPERIENCES****Ulsan National Institute of Science and Technology**

Teaching Assistant

Spring 2024, Spring 2025

- AI Programming I

Research Intern

Jun. 2022 – Aug. 2022

- Robotics and Mobility Lab.

WasteAnd GmbH

Oct. 2022 – Jun. 2023

Working Student

Jacobs University Bremen (Currently Constructor University)

Teaching Assistant

2021 – 2023

- Algorithms and Data Structures (C++)
- Programming in C/C++
- Embedded Systems
- Introduction to Robotics and Intelligent Systems Lab (Arduino)

SKILLS**Languages**

- Korean ●●●●●
- English ●●●●●
- German ●●●○○

Programming Languages

Python, C++, Matlab

Frameworks & Libraries

PyTorch, OpenCV, Pandas, NumPy

Tools & Platform

ROS, Git, Docker, MORAI simulator