

# Eunchong Kim

전문연구요원 보충역 편입 희망 (본인 T.O 보유)

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 [Personal Website](#) (Portfolio)

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## RESEARCH INTEREST

**Autonomous Driving: End-to-End Stack & Perception Systems**

## EDUCATION

**Ulsan National Institute of Science and Technology (UNIST)**

M.S. in Artificial Intelligence

Ulsan, Republic of Korea

Sep. 2023 – Feb. 2026

- 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) ≈ 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

Eunchong Kim, Heodon Jeong, Sungjun Heo, Sunhwi Kim, Seongjae Lee, Jaichan Shin, Heecheol Yoo, and Jeong hwan Jeon, "Deployment-Oriented End-to-End Autonomous Driving: Enhancing Closed-Loop Stability with a Lightweight Camera-Only Framework," in Proc. of the IEEE Intelligent Vehicles Symposium (IV), 2026. (Accepted)

## 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)**

- Drove iterative performance gains through a comprehensive feedback loop: Performance Analysis → Data-driven and model-centric improvements → Re-training & Evaluation.
- Developed an E2E model from scratch, targeted for NVIDIA Jetson AGX Orin. Balanced real-time performance and functionality by selectively integrating essential driving modules through trade-off analysis between computational cost and performance gains.
- Developed a training-only auxiliary module to resolve task-wise prediction conflicts in Multi-task Learning, ensuring physically plausible outputs without any inference overhead.
- Implemented a latency-aware labeling policy to compensate for the temporal gap between sensor input and actual actuation.
- Achieved a real-time inference speed of 16Hz on NVIDIA Jetson AGX Orin.
- Tech. Stacks: BEV Segmentation, 3D Object Detection, Vectorized Map Construction, Transformer-based Planning and Control.

- 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 lightweight pedestrian detection model using MTKD to maximize performance within limited computational budgets; achieved a 16% mAP gain over standard fine-tuning while maintaining real-time inference.

**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.

**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**

Working Student

Oct. 2022 – Jun. 2023

**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