

GIHWAN KIM

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[LinkedIn](#), [Personal site](#), [Git](#)

EDUCATION

Chungnam National University

Master of Computer Systems and Software, GPA: 4.31/4.5

Daejeon, Republic of Korea

Mar 2024 - Expected 2026

Chungnam National University

Bachelor of Engineering, GPA: 3.72/4.5

Daejeon, Republic of Korea

Mar 2017 - Feb 2024

RESEARCH EXPERIENCE

Visiting Scholar

Software and Societal Systems department, *Carnegie Mellon University*

Pittsburgh, PA

Aug 2025 - Feb 2026

- Completed an AI education program covering machine learning and scalable multimedia data analysis.

Research Intern (Visitor)

AirLab, Robotics Institute, *Carnegie Mellon University*

Pittsburgh, PA

Aug 2025 - Feb 2026

- Developed quantization methods for learning-based visual odometry under Prof. Sebastian Scherer, leading to a co-first-author paper under review for RSS 2026.

Research Intern

Electronics and Telecommunications Research Institute (ETRI)

Daejeon,

Republic of Korea

Jan 2024 - Feb 2024

- Conducted research on efficient AI for edge devices, resulting in a first-author WACV 2026 oral paper and a co-first-author publication at the ECCV 2024 NVIDIA Workshop.

Visiting Scholar

Korean Software Square Winter 2023 program, *Purdue University*

West Lafayette, IN

Jan 2023 - Feb 2023

- Developed an on-device AI counter-drone system, resulting in a first-author ICTC 2023 paper that received the Best Paper Award.

Research Student

Embedded Systems Laboratory, *Chungnam National University*

Daejeon,

Republic of Korea

Apr 2022 - Dec 2023

- Researched quantization and optimization for a low power computer vision system.

PUBLICATIONS

• International Conference

- Gihwan Kim, et al. "IPTQ-ViT: Post-Training Quantization of Non-linear Functions for Integer-only Vision Transformers" **WACV 2026 (Oral)**.
- Gihwan Kim, et al. "Mixed Non-linear Quantization for Vision Transformers" ECCV 2024 Workshop on Computational Aspects of Deep Learning (NVIDIA), 2024.
- Hanbin Lee, et al. "Lightweight Disaster Semantic Segmentation for UAV On-Device Intelligence" IGARSS 2024 (2nd author).
- Gihwan Kim, et al. "Power Efficient Long Range Drone Networking System for UAV Detection" ICTC 2023.

• Blueprints

- "Quantization for Learning-based Visual Odometry with Metrics-aware Covariance"

• Domestic Conference

- Gihwan, et al. (2023-12-20). Lightweight Semantic Segmentation Model with ResNet-based Encoder-Decoder Architecture for Edge Device

Awards

ICTC 2023 Best Paper Award

2023

- The 14th International Conference on ICT Convergence (ICTC 2023)

PROJECTS

Quantization for Learning-based Visual Odometry with Metrics-aware Covariance

Sep 2025 ~ Current

- This project is conducted while CMU visiting program
- Collaborative lab: AirLab
- Co-researcher: Sifan Zhou, Yutian Chen and Yuheng Qiu
- Advisor: Prof. Sebastian Scherer

Dec 2022 ~ Current

Development of on-board-AI computing technology for surveillance and reconnaissance satellites

SKILLS

- Programming: Python, C++, C
- Frameworks, Tools & Platforms: PyTorch, TensorRT, ONNX, TVM, CUDA