GIHWAN KIM

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LinkedIn, Personal site, Git

EDUCATION

Chungnam National University — **Republic of Korea, Daejeon**
Master of Computer Systems and Software, GPA: 4.31/4.5 — Mar 2024 - Current

Chungnam National University — **Republic of Korea, Daejeon**
Bachelor of Engineering, GPA: 3.72/4.5 — Mar 2017 - Feb 2024

EXPERIENCE

Visiting Scholar — **USA, Pittsburgh**
| *Software and Societal Systems department at* ***Carnegie Mellon University*** — Aug 2025 - Feb 2026
• Participated in a program that pretrains AI, ML, and scalable multimedia data analysis

Research Intern — **USA, Pittsburgh**
| *AirLab, Robotics Institute at* ***Carnegie Mellon University*** — Aug 2025 - Feb 2026
• Collaborated with Sifan Zhou, Yutian Chen, and Yuheng Qiu on quantization for learning-based visual odometry.
• Advisors: Prof. Sebastian Scherer
• Implemented and deployed the quantized system on NVIDIA Jetson Thor.
• Submitted, RSS 2026 — Co-first author (equal contribution)

Research Intern — **Republic of Korea, Daejeon**
| *Electronics and Telecommunications Research Institute (ETRI)* — Jan 2024 - Feb 2024
• Conducted research in the artificial Intelligence Computing Research Laboratory.
• Implemented and evaluated lightweight DL models for edge devices.
• Accepted (Oral), WACV 2026 — First author
• Published, ECCV 2024 NVIDIA Workshop — Co-first author (equal contribution)

Visiting Scholar — **USA, West Lafayette**
| *Korean Software Square Winter 2023 program at* ***Purdue University*** — Jan 2023 - Feb 2023
• Implemented and researched counter drone system with on-device AI.

Research Student — **Republic of Korea, Daejeon**
| *Embedded Systems Laboratory at Chungnam National University* — Apr 2022 - Dec 2023
• Researched quantization and optimization for a low power computer vision system.

SW program — **Republic of Korea, Seoul**
| *42 Seoul at Innovation Academy (software educational program)* — Feb 2020 - Jun 2021
• Implemented mini bash program, mini-C standard library and ray tracing program

PUBLICATIONS

- **International Conference**

[Oral] Gihwan, et al. "IPTQ-ViT: Post-Training Quantization of Non-linear Functions for Integer-only Vision Transformers" **WACV 2026**, The IEEE/CVF Winter Conference on Applications of Computer Vision 2026.

Gihwan, et al. "Mixed Non-linear Quantization for Vision Transformers**" ECCV 2024 workshop**, European Conference on Computer Vision. Cham: Springer Nature Switzerland, 2024.

Hanbin, et al. "Lightweight Disaster Semantic Segmentation for UAV On-Device Intelligence" **IGARSS 2024**, IEEE International Geoscience and Remote Sensing Symposium. IEEE, 2024 (2nd author).

Gihwan, et al. "Power Efficient Long Range Drone Networking System for UAV Detection" 2023 14th International Conference on Information and Communication Technology Convergence (ICTC). IEEE, 2023.

- **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)

3rd prize 2023
- 2023 CNU SW/AI competition (CNU, Chungnam National University)

3rd prize 2023
- Undergraduate research competition (Korea Software Congress 2023)

SKILLS

Programming/Scripting Languages: Python, C++, C
Frameworks & Tools: PyTorch, TensorRT, ONNX, TVM