Min Chae **Kim**

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Education

Sejong University *Seoul, S.Korea*

B.S. in Department of Intelligent Mechatronics Engineering *Mar. 2022 - Feb. 2027 (Expected)*

- Interest: Machine Learning, Image Processing, Computer Vision, Object Detection
- Total GPA of 4.0/4.5, Major GPA of 4.04/4.5

Research Experiences

MINES Lab (Advisor: Hyungseok Kim) *Sejong University*

Undergraduate Researcher *Dec. 2023 - Jan. 2026*

- Developed and implemented various deep learning models for computer vision tasks, including Human Action Recognition (HAR) and Object Detection.

Perceptual AI LAB (Advisor: Chanho Eom) *Chung-ang University*

Undergraduate Researcher *Feb. 2026 - Present*

Project Experiences

Detection of Abnormal Human Activity Recognition

Team Member *Mar. 2024 - Jan 2025*

- Developed a system to identify and flag unusual human behaviors from real-time webcam streams for automated security monitoring.
- Engineered a two-stage pipeline: first, utilized YOLOv11 for efficient human detection, then processed the resulting bounding boxes with a Two-Stream CNN for detailed action classification.

Multimodal Wearable Visual Aid for the Visually Impaired

Team Member *Feb. 2025 - Jan. 2026*

- Contributed to the development of a real-time navigational assistance system by designing and training models to detect indoor and outdoor obstacles from stereo camera input.
- Fine-tuned an RT-DETR model on a custom dataset of outdoor obstacles, achieving over 90% mAP50 for 5 classes and preparing the model for future deployment on an NPU.

AI Docent Robot for the Visually Impaired (Capstone Design)

Team Member *Mar. 2026 - Jun. 2026*

- Developed an AI-powered museum docent robot for visually impaired visitors by integrating autonomous navigation with voice-based interactive guidance.
- Implemented ROS2-based autonomous navigation and an LLM-powered RAG pipeline for personalized artwork explanations and real-time Q&A.

Publications

AI Robotic Infant and Toddlers Alert In-Home System *ICCAS 2025*

M Kim, S Lee, T Kim and H Kim (oral presentation) *Nov.2025*

- Developed a unified vision-based system using a VideoMAE V2 backbone and low-light enhancement filter to recognize 8 baby behaviors, validating its feasibility for real-time robotic monitoring.
- Reviewed one of the paper submissions for ICCAS 2025.

Extracurricular Activities

Sejong AI Circle SAI

Member *Mar. 2025 - Feb. 2026*

- Led and mentored a study group of 4 junior members, focusing on foundational deep learning concepts like CNNs and RNNs.

Korea Electronics Technology Institute (KETI)

Research Internship *Jan. 2026 - Feb. 2026*

- Developed an on-device VLM service using Phi-4 on Jetson Orin and Raspberry Pi.

Honors & Awards

2025 **Bronze Award,** Sejong AI Challenge 2025S *Seoul, S.Korea*
2025 **Gold Award,** Sejong AI Challenge 2025F *Seoul, S.Korea*

Skills

Programming *Python, C/C++, Java*
Deep Learning *Pytorch, Tensorflow, Scikit-learn*
Data Analysis *Numpy, Pandas, Matplotlib*
Languages *Korean, English, Japanese*

Certifications

TOEIC (975/990) *2025.04.13*
TEPS (403/600) *2026.03.28*
JLPT N1 (143/180) *2026.01.19*