

CHOI SU HYUN

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RESEARCH INTERESTS

3D Scene Understanding (Depth Estimation, Reconstruction) | **Detection & Segmentation**

EDUCATION

Hanyang University (ERICA)

B.S. in Robot Engineering (GPA: - / 4.5)

Ansan, South Korea

Mar 2021 – Present

EXPERIENCE

Undergraduate Research Intern

Korea Electrotechnology Research Institute (KERI)

Jan. 2026 – Feb. 2026

Ansan, South Korea

- Constructed and preprocessed medical image datasets for deep learning-based biometric analysis
- Generated segmentation masks and performed image–mask alignment for supervised learning pipelines
- Implemented data cleaning and preprocessing workflows for medical imaging datasets
- Reviewed and experimented with GAN-based image analysis models

PROJECTS

Physical Security Mobile Robot System | PyTorch, YOLO, OpenCV, ROS2

Mar 2025 – Present

- Designed and implemented a real-world physical security robot system for unauthorized access detection in Kakao Data Center (Ansan)
- Developed a multi-camera multi-object tracking (MCMOT) pipeline for cross-zone surveillance
- Implemented cross-camera person re-identification for continuous tracking across disjoint camera views
- Performed camera calibration and BEV (Bird’s-Eye-View) projection for global spatial localization
- Integrated ROS2-based mobile robot dispatch and control system for autonomous interception and patrol

Kaggle Machine Learning Competition | Python, PyTorch, NumPy

Dec 2025 – Present

- Achieved Top 12% on the Kaggle Public Leaderboard among over 3,000 teams
- Built PyTorch-based deep learning models with custom preprocessing and augmentation pipelines
- Designed cross-validation strategies and optimized models based on leaderboard feedback

AI Autonomous Driving Contest | Python, ROS2, OpenCV, YOLO

Sep. 2025 – Nov. 2025

- Implemented camera-based lane detection for autonomous path following
- Developed YOLO-based recognition of traffic lights, pedestrians, and obstacles
- Integrated ROS-based Ackermann steering control for autonomous driving

TECHNICAL SKILLS

Languages: Python, C/C++

Frameworks: ROS2, PyTorch

Developer Tools: Git, VS Code, Ubuntu Linux, Docker

Libraries: NumPy, OpenCV

CERTIFICATION

KT AI AICE (Associate) | Certified AI Competency Evaluation

Mar 2026

TOEIC 875 | Test of English for International Communication

Mar 2026

LEADERSHIP & SERVICE

Executive Officer (General Affairs Lead)	<i>HY-MEC Robotics Engineering Society</i>	Mar 2025 – Dec 2025
• Planned, executed, and managed an autonomous driving hackathon		
• Organized technical seminars and robotics study sessions within the society		

Squad Leader & Drill Instructor	<i>Korea Army Training Center, Nonsan</i>	Apr 2023 – Oct 2024
• Led and trained recruits, managing daily drills and discipline		