



# Hyeonji Shin

ROBOTICS · PERCEPTION & LOCALIZATION

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## Education

<b>GIST</b> (Gwangju Institute of Science and Technology) @MPIL M.S. in Mechanical and Robotics Engineering (Adviser: Prof. Pyojin Kim)	Gwangju, South Korea Mar. 2025 - Current
<b>University of Seoul</b> B.S. in Electrical and Computer Engineering	Seoul, South Korea Mar. 2021 - Feb. 2025

## Work Experience

Research Internship @UOS Robotics Lab (Adviser: Prof. Myunjoong Hwang) - Optimal Path Planning in Frenet Frame for Autonomous Vehicle Racing Competition - LiDAR Inertial Odometry Comparison in CARLA Simulator - Implementation of 3D Simulator for Autonomous Robot Race Challenge (OSM, CARLA)	Jul. 2023 - Aug. 2024 (Mar. - Aug. 2024) (Mar. - May 2024) (Dec. 2023 - Feb. 2024)
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## Publication

### International Conference

Mar. 2025 (Edge Track) **“SAT-SLAM: Structure-Aware Thermal SLAM Leveraging Structure Regularity of Lines”** 3DV 2025

### Domestic Conference

Feb. 2025 **“Local Path Planning for Dynamic Obstacle Avoidance and High Speed in Autonomous Racing”** KROS 2025  
Seongbin Jo, Hyeonji Shin, Kyuhwan Choi, Taegyeom Lee, Kanghyeon Choi, Dongwook Moon, Myunjoong Hwang

Jul. 2024 **“Comparison of LiDAR-Inertial Odometry for GNSS-denied areas in Autonomous Vehicle”** ICROS 2024  
Hyeonji Shin, UiHun Sagong, Myunjoong Hwang

## Projects

Spring 2026 (ongoing) <b>Fine-tuning and Distillation for Campus-scale Visual Localization</b> Project lead — proposal, pipeline design, dataset curation, fine-tuning of OrienterNet	CV (AI5303) Term Proj.
Fall 2025 <b>Vision-Assisted Transparent-Aware LiDAR Mapping</b> Main Role — Camera-LiDAR calibration (Unitree L1 LiDAR and Realsense D435i)	Autonomous (AI5003) Term Proj.

## Awards

Nov. 2024 <b>The World Embedded SW Contest 22nd - Autonomous Racing</b> (Honorable Mention)	MOTIE, South Korea
Aug. 2024 <b>Autonomous Driving Robot Race Competition 2024-2nd</b> (2nd Place)	KROS
Feb. 2024 <b>2023 Winter Engineering Research Internship Presentation</b> (Encouragement Award)	Univ. of Seoul

## Skills

<b>Programming</b>	C++ / C, Python, MATLAB
<b>Frameworks</b>	ROS2 / ROS, PyTorch, OpenCV, CARLA
<b>Tools</b>	Git, Docker, Linux
<b>Languages</b>	English (TOEIC Speaking IH), Korean (Native)