Junseo Min — Researcher

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Education

Kwangwoon University	**Seoul, South Korea**

B.S. in Robotics (Major)
B.S. in Computer Science (Minor)
Micro Module in Robot Intelligence (Intermediate)
Micro Module in Robot Navigation (Advanced) — *2020.03–2026.02*

Korea Digital Training	**Seoul, South Korea**
Autonomous Driving Technician Training Program, Bootcamp	*2023.05–2023.10*

Articles

*Junseo Min,*Inseok Jeon, *Sumin Lee, *Yunkyo Hong, Yaesop Lee, "AI-Based Worker Assistant Robot: Shaping the Future of Smart Farms", ICROS 2023 (* Equally Contributed)

(TBD) CIRCLEBA,RA-L

Career

Machine Perception and Intelligence Lab (GIST)	**Gwangju, South Korea**
Research Intern	*2024.06–Present*

- ○ Designed LiDAR reconstruction models using Point Transformer V3 and Perceiver architectures.
- ○ Conducted research on localization-related models and advanced 3D reconstruction techniques

Immersion	**Seoul, South Korea**
Robot Engineer (full-time)	*2023.12–2024.09*

- ○ Built outdoor HD maps and implemented SLAM pipelines for autonomous robots using 3D LiDAR and ROS2.
- ○ Solved technical challenges like sunlight interference and resource limits on Jetson Orin.

Ubiquitous & AI Lab	**Seoul, South Korea**
Undergraduate Research Assistant	*2022.12–2023.12*

- ○ Studied machine learning fundamentals and transformer attention modules through research papers and advisor discussions.
- ○ Developed a stock price prediction model for the KRX competition using TensorFlow and advanced deep learning techniques.

Cheil Worldwide	**Seoul, South Korea**
2022 Samsung Unpack Project - Web QA (intern, full-time)	*2022.6–2022.09*

- ○ Conducted QA for product description pages and collaborated with overseas teams.
- ○ Developed an interest in software development, leading to a Computer Science minor.

Projects

LiDAR Upsampling for Localization: Researched deep learning-based point cloud upsampling to improve localization, using PointTransformer V3 and TULIP as baselines.

HD Map Implementation: Developed a high-definition map for advertising robots using ROS and FAST-LIO2. Researched sunlight interference solutions.

Attention Robot Implementation: Implemented Stanley controller, path planning, and NDT-OMP localization in ROS2, optimizing performance with OpenMP and Eigen.

Stock Prediction Model: Built a Transformer-based stock prediction model using KOSPI data.

SmartFarm worker assistant Robot: Developed end-to-end system for mushroom harvesting robot.

Awards & Scholarship

Scholarship   **Kwangwoon University**
KRW 1,118,000 ($\approx$ USD 1,000)   *Summer 2025*
Academic Excellence Scholarship (Merit-based)

Skills & Interests

Language

TOEIC   **ETS**
Score 915   *May 2025*
English proficiency test

Programming

C++, Python, ROS1/2, PyTorch

Research Interest

SLAM, Navigation, Localization, DeepLearning

Activities

Kwangwoon University   **Baram**
Academic Research Club   *2020.03–2020.11*

Kwangwoon University   **Robotics Department**
Student Council   *2020.03–2020.11*

Republic of Korea Army   **Military Instructor**
Militery Service   *2020.12–2022.05*