

Junseo Min — Researcher

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Education

Kwangwoon University

Robotics

Major

Kwangwoon University

Computer Science

Minor

Skills & Interests

Programming: C++, Python, ROS1/2, PyTorch

Strong

Research Interest: SLAM, Navigation, Localization, DeepLearning

Professional Interests

Career

Cheil Worldwide

2022 Samsung Unpack Project - Web QA

Seoul, South Korea

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.

Ubiquitous & AI Lab

Undergraduate Research Assistant

Seoul, South Korea

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.

Immersion

Autonomous Driving Developer

Seoul, South Korea

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.

Machine Perception and Intelligence Lab (GIST)

Research Intern

Gwangju, South Korea

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

Activities

Kwangwoon University

Academic Research Club

Baram

2020.03–2020.11

Kwangwoon University

Student Council

Robotics Department

2020.03–2020.11

Republic of Korea Army

Military Service

Military Instructor

2020.12–2022.05

Kwangwoon University

Autonomous Driving Technician Training Program

2023.05–2023.10

Projects

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.

Articles

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