Education

Kwangwoon University

Robotics Major

Kwangwoon University

Computer Science Minor

Skills & Interests

Programming: C++, Python, ROS1/2, PyTorchStrongKnowledge: Java, Serial Data, Computer VisionIntermediateInterest: SLAM, Navigation, Localization, DeepLearningProfessional Interests

Career

Cheil Worldwide Seoul, South Korea

2022 Samsung Unpack Project - Web QA

2022.6-2024.09

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

Ubiquitous & Al Lab

Seoul, South Korea

Undergraduate Research Assistant

2022.12-2023.12

- O 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 Seoul, South Korea

Autonomous Driving Developer

2023.12-2024.09

- O 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)

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

Activities

Kwangwoon UniversityBaramAcademic Research Club2020.03–2020.11

Kwangwoon University
Student Council
Robotics Department
2020.03–2020.11

Republic of Korea Army
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, "Al-Based Worker Assistant Robot: Shaping the Future of Smart Farms", ICROS 2023