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*
Knowledge: Java, Serial Data, Computer Vision   *Intermediate*
Interest: SLAM, Navigation, Localization, DeepLearning   *Professional Interests*

Career

Cheil Worldwide   **Seoul, South Korea**
2022 Samsung Unpack Project - Web QA   *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   **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.

Immersion   **Seoul, South Korea**
Autonomous Driving Developer   *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)   **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 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*

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