Youngeon **Kim**

MULTI · MOBILE ROBOTICS ENGINEER

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"seize the day."

Summary

This is YoungEon Kim, a robotics researcher and engineer. My research interests lie in advancing multi-robot systems and autonomous navigation. I am particularly focused on developing collaborative path planning systems and optimizing mobile navigation to enhance the efficiency and adaptability of robots in dynamic environments.

Education

Keymyung University *Daegu, S.Korea*

B.S. in Robotics Engineering *Mar. 2017 - Feb. 2023*

- GPA : 4.2 / 4.5 major GPA : 4.4 /4.5

Internships

Robot Dynamics and Intelligent Control Lab *Daegu, S.Korea*

Undergraduate researcher *Mar. 2021 - Jan. 2022*

- Designed and implemented Multi-DOF Control Systems
- Managed motor dynamics with MFC

Work Experience

Korea Electronics Technology Institute, KETI *Seoul, S.Korea*

Researcher *May. 2023 - Current*

- Multi Robot System
- Robot Elevator System
- mobile robot navigation system
- Docking Process develop
- Deployed a centralized logging environment which gather log data from docker containers

Korea Institute of Robotics, KIRO *Gumi, S.Korea*

Intern *July. 2022, Mar. 2023*

- Education of Robotics
- Manipulator

Projects

Development of Cooperate Mapping, Environment Recognition and Autonomous Driving Technology for Multi Mobile Robots Operating in Large-scale Indoor Workspace *KETI*

PARTICIPANT *May. 2023 - Current*

- Developing a multi-robot navigation system within the Open-RMF framework to optimize fleet management in large-scale environments.
- Implementing deep learning-based anomaly detection for a simulation environment featuring 30 mobile robots to identify and preempt operational failures.

Collaboration Intelligence-Based Robot Plus Competitiveness Support Project *KETI*

PARTICIPANT *May. 2023 - Current*

- Developed a robot system for manufacturing logistics automation processes.
- Established inter-cell logistics lines using a pick-and-drop sequence.
- Integrated AGVs with manufacturing logistics processes through upper-level control using TCP/IP communication protocols.

Development and Validation of BM and Robots for Software Defined Robot Domain Services

KETI

PARTICIPANT

Jan. 2025 - Current

- Developed a robust OTA update framework for remote firmware and software synchronization in SDR environments.
- Designed and implemented autonomous charging docking scenarios to ensure continuous robot operation.
- Developed an interoperable interface module to facilitate robot-to-elevator communication and multi-floor navigation.

Domestic Conference

Cooperative Autonomous Driving System for Multi-Mobile Robots Using Open-RMF

KROS

Youngeon Kim, Keunhwan Kim, Dong Yeop Kim

Feb. 2024

- Korea Robotics Society (KROS) 455-456

Method for Cross-Utilization of Obstacle Recognition Information in a Multi-Robot System for Collaborative Path Planning

ICROS

Youngeon Kim, Keunhwan Kim, Dong Yeop Kim

July. 2024

- Institute of Control, Robotics and Systems, Korea(ICROS) 455-456

Traversability Assessment and Path Planning Using Obstacle Recognition Information for Multi-Robot System

ICCAS

Youngeon Kim, Dong Yeop Kim Keunhwan Kim

Oct. 2024

- International Conference on Control, Automation and Systems(ICCAS) (not Domestic) 1670 - 1671

Anomaly Detection and Visualization Framework for Multi-Robot Systems Using RMF

ICCAS

Youngeon Kim, Yohan Jung, Dong Yeop Kim, Keunhwan Kim

Dec. 2025

- International Conference on Control, Automation and Systems(ICCAS) (not Domestic) 808 - 811

Skills

DevOps	Docker, Git, ROS2/ROS
Programming	C++/C, Python, Matlab
Languages	Korean, English

Extracurricular Activity

Robotics Blog

Github Blog

WRITER

Dec. 2022 - Current

- Sharing my studies and notes on robotics through this blog.
- Here is the link to my blog.

Transforming Hybrid Operational Robot

KMU

PARTICIPANT

Dec. 2021 - Jun. 2022

- Design of a four-legged robot with a vertically adjustable body frame and wheels on each leg.
- Tested and assembled the design using CATIA and produced the final model through 3D printing.
- Developed sensor and actuator control systems and driving algorithms using ROS packages.