Jiwon Park

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SUMMARY

Master's student focused on quadruped robot autonomous navigation through generative modeling approaches. Skilled in robot software development and implementation of navigation algorithms for robotic systems.

RESEARCH INTERESTS

- Autonomous Navigation
- Off-road Mobile Robot
- Generative Model
- Neural Mapping

EDUCATION

Mar. 2025 - Current
KAIST — **Daejeon, Korea**
M.S course in Robotics Program

Mar. 2019 - Aug. 2024
Kyung Hee University — **Yongin-si, Korea**
B.S course in Department of Electronic Engineering, Software Convergence (Robot Vision Track)

PUBLICATIONS

INTERNATIONAL CONFERENCES

May. 2026
DreamFlow : Local Navigation Beyond Observation via Conditional Flow Matching in the Latent Space
IEEE International Conference on Robotics & Automation (ICRA), 2026
Jiwon Park*, Dongkyu Lee*, I Made Aswin Nahrendra, Jaeyoung Lim and Hyung Myung

Dec. 2023
BumpyPatch: Heightmap-based Outdoor Point Cloud Segmentation to Find Less Bumpy Road
IEEE International Conference on Robotic Computing (IRC), 2023
Jiwon Park and Hyoseok Hwang

Dec. 2022
Outdoor Visual SLAM and Path Planning for Mobile-Robot
IEEE International Conference on Robotic Computing (IRC), CHARMS workshop, 2022
Seongil Heo, Jueun Mun, Jiwoong Choi, **Jiwon Park**, Eric T. Matson

DOMESTIC JOURNAL

Aug. 2024
Transformer based Collision Detection Approach by Torque Estimation using Joint Information
Journal of Korea Robotics Society Vol.19 No.3
Jiwon Park, Daegyu Lim, Sumin Park, Hyeonjun Park

EXPERIENCE

Mar. 2024 - Sep. 2024
NAVER LABS — **Seongnam-si, Korea**
Internship

- Developed software of inference board for robot, enhancing on-board processing capabilities
- Implemented deep learning model optimization techniques for low-cost NPUs
- Integrated third-party robots into multi-robot intelligence system (ARC)
- Developed monitoring applications for robot experiments

`ROS1 / ROS2 / RKNN / gRPC / MQTT / CMake / Flutter`

Dec. 2023 - Feb. 2024 **ROBROS** **Seoul, Korea**

Internship

- Developed experimental environments for robotic arms using MuJoCo simulation platform
- Proposed a transformer-based model for detecting collisions in robotic arms without external sensors, relying on joint position and torque controllers

`ROS 1 / MuJoCo / PyTorch`

Apr. 2022 - Aug. 2022 **Purdue University** **West Lafayette, IN, USA**

Student Intern

- Conducted research on outdoor mobile visual SLAM (Simultaneous Localization and Mapping)
- Focused on enhancing accuracy and reliability of visual navigation for mobile robots

AWARD & HONORS

Mar. 2025 **2nd place in Quadruped Robot Challenges (QRC), ICRA**
- IEEE Robotics and Automation Society

Mar. 2023 - Aug. 2024 **Full-ride scholarship until graduation**
- KC Future Foundation

Apr.2022- Aug.2022 **Purdue-Korea Software Square Program**
- Ministry of Science and ICT

Dec.2022 **SW Festival, Grand Prize**
- Kyung Hee University, Software College

Nov.2021 **The World Embedded Software Contest, Participation Award**
- Korea Embedded Software and System Industry Association

Dec.2020 **Open SW Utilization Contest, Excellence Prize**
- Kyung Hee University, Software College

Jul.2020 **Autonomous Mini-drone Aviation Competition, Excellence Prize**
- Korean Institute of Electrical Engineers

LANGUAGES

English Proficient (TOEIC : 945)

Korean Native