

Jiwon Park



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SUMMARY

Passionate student specializing in robot perception, with a talent for developing robotic system software. Dedicated to advancing research in robust perception techniques to enhance the reliability of outdoor mobile robots.

RESEARCH INTERESTS

- Robot Perception
- Off-road Mobile Robot
- Traversable Region Segmentation

EDUCATION

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

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

PUBLICATIONS

INTERNATIONAL CONFERENCES

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

SKILLS

- ROS 1, ROS 2
 - Docker
 - Git
- C++
 - CMake
 - Python
 - PyTorch,
 - OpenCV, Open3D

AWARD & HONORS

- 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