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

LANGUAGES

English Proficient (TOEIC : 945)

Korean Native