

Harin Park

[E-mail](#) | [Website](#) | [Github](#)

RESEARCH INTEREST

3D vision & Robotics

Computer vision, Depth estimation, Sensor fusion, Event cameras

EDUCATION

Ulsan National Institute of Science and Technology, UNIST

M.S., Artificial Intelligence Graduate School (GPA: 3.93/4.3)

Advisor: Prof. Kyungdon Joo

Sep. 2022 – Aug. 2024

Ulsan, South Korea

Pukyung National University

B.S., Geospatial information (GPA: 4.32/4.5)

Mar. 2017 – Feb. 2021

Busan, South Korea

RESEARCH EXPERIENCE

Graduate Research Assistant

3D Vision & Robotics Lab, UNIST

Sep. 2022 – Present

Ulsan, South Korea

- Depth estimation combining events and images.
- A benchmark collaborative SLAM dataset for multiple service robots.

Research Internship

3D Vision & Robotics Lab, UNIST

Mar. 2022 – Aug. 2022

Ulsan, South Korea

- Study on 3D vision and Computer vision.
- Optical flow based on event cameras.

Research Assistant

Lab for sensor and modeling, University of Seoul

Mar. 2021 – Feb. 2022

Seoul, South Korea

- LiDAR sensor modeling in simulation.
- Aerial Triangulation.

PUBLICATION

**Formerly known as Taeyeon Park.*

International

[1] **Harin Park**, I. Lee, M. Kim, H. Park, K. Joo, “A Benchmark Dataset for C-SLAM in Service Environments,” *IEEE RA-L submitted*, (Under review)
(Workshop on Synthetic Data for Computer Vision, in conjunction with CVPR 2024)

Domestic

[1] **Taeyeon Park**, G. Lee, J. Cheon, I. Lee, “Simulation of LiDAR Sensor considering Rainfall Effect,” *KICS*, 2021.

PROJECTS

- Depth estimation based on omnidirectional cameras.** Sep. 2023 – Present
- Develop a structure-aware monocular depth estimation model for indoor scenes.
 - On-going project.
- Depth estimation combining events and images.** Sep. 2023 – Jun. 2024
- Develop a monocular depth estimation model via the fusion of events and images.
 - Graduation project.
- Collaborative SLAM (C-SLAM) benchmark dataset.** Sep. 2022 – Present
- Provide C-SLAM benchmark synthetic dataset for multiple service robots.
 - Funded by the IITP, South Korea.
 - Accepted to CVPR Workshop 2024.
 - Submitted to RA-L (Under review).
- Aerial Triangulation using ground control point (GCP) chips.** May. 2021 – May. 2021
- Evaluating for the validity of introducing GCP Chips in Aerial Triangulation.
- LiDAR sensor modeling in simulation.** Mar. 2021 – Feb. 2022
- LiDAR sensor radiometric modeling considering rainfall effect.
 - Accepted to KICS domestic conference.

AWARD & HONOR

Long paper honorable mention (Runner-up award), *Workshop on Synthetic Data for Computer Vision in conjunction with CVPR, 2024.*

TEACHING EXPERIENCE

- Teaching Assistant, UNIST** Sep. 2023 – Dec. 2023
Introduction to robotics course.
- Teaching Assistant, University of Seoul** Sep. 2021 – Dec. 2021
Photogrammetry course.

SKILLS

Languages: Korean (native), English (proficient)
Programming: Python, Pytorch, OpenCV, MATLAB
Tools: Docker, VS Code, Git, ROS, NVIDIA Isaac Sim

REFERENCE

Prof. Kyungdon Joo, Professor, UNIST
Relationship: M.S. advisor
E-mail: kyungdon@unist.ac.kr