

Harin Park

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

RESEARCH INTEREST

3D vision & Robotics

Depth estimation, Sensor fusion, Computer vision, Event cameras

EDUCATION

Ulsan National Institute of Science and Technology, UNIST

M.S., Artificial Intelligence Graduate School (GPA: 4.06/4.3)

Advisor: Prof. Kyungdon Joo

Sep. 2022 – Present

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

Sensor and Modeling Lab, 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*, (Under review)

(Workshop on Synthetic Data for Computer Vision, in conjunction with CVPR 2024)

[2] **Taeyeon Park**, J. Cheon, I. Lee, “Modeling and Simulation of rainfall effect of autonomous driving LiDAR sensor,” *GISUP*, 2021.

Domestic

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

PROJECTS

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| Depth estimation combining events and images. <ul style="list-style-type: none">• Develop a monocular depth estimation model via the fusion of events and images.• Graduation project. | Sep. 2023 – Jun. 2024 |
| Depth estimation based on omnidirectional cameras. <ul style="list-style-type: none">• Develop a structure-aware monocular depth estimation model for indoor scenes.• On-going project. | Sep. 2023 – Present |
| Collaborative SLAM (C-SLAM) benchmark dataset. <ul style="list-style-type: none">• 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). | Sep. 2022 – Present |
| Aerial Triangulation using ground control point (GCP) chips. <ul style="list-style-type: none">• Evaluating for the validity of introducing GCP Chips in Aerial Triangulation. | May. 2021 – May. 2021 |
| LiDAR sensor modeling in simulation. <ul style="list-style-type: none">• LiDAR sensor radiometric modeling considering rainfall effect.• Funded by the ETRI, South Korea.• Accepted to KICS, GISUP International conference. | Mar. 2021 – Feb. 2022 |

AWARD & HONOR

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

TEACHING EXPERIENCE

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| Teaching Assistant, UNIST
<i>Introduction to robotics course.</i> | Sep. 2023 – Dec. 2023 |
| Teaching Assistant, University of Seoul
<i>Photogrammetry course.</i> | Sep. 2021 – Dec. 2021 |

SKILLS

Languages: Korean (native), English (proficient)
Software: Python, PyTorch, Matlab, Numpy, OpenCV, LaTeX, Isaac Sim
Developer Tools: Git, Docker, VS Code

REFERENCE

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