

# Harin Park

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

## RESEARCH INTEREST

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### 3D vision & Robotics

Computer vision, Depth estimation, Sensor fusion, Event cameras

## EDUCATION

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### 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*

### Pukyong National University

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

Mar. 2017 – Feb. 2021

*Busan, South Korea*

## RESEARCH EXPERIENCE

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### Graduate Research Assistant

*3D Vision & Robotics Lab, UNIST*

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

Sep. 2022 – Aug. 2024

*Ulsan, South Korea*

### Research Internship

*3D Vision & Robotics Lab, UNIST*

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

Mar. 2022 – Aug. 2022

*Ulsan, South Korea*

### Research Assistant

*Lab for sensor and modeling, University of Seoul*

- LiDAR sensor modeling in simulation.
- Aerial Triangulation.

Mar. 2021 – Feb. 2022

*Seoul, South Korea*

## PUBLICATION

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*\*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*, 2025

([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

[3] J. Cheon, **Taeyeon Park**, I. Lee, “Evaluation for the validity of introducing GCP Chips in Aerial Triangulation,” *ISRS* 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 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 – Dec. 2024
- 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).
- Automation of Aerial Triangulation using ground control point chips.** May. 2021 – May. 2021
- Evaluating for the validity of introducing GCP Chips in Aerial Triangulation.
  - Accepted to ISRS international conference.
- Simulation of LiDAR Sensor considering rainfall effect.** Mar. 2021 – Feb. 2022
- LiDAR sensor radiometric modeling considering rainfall effect.
  - Evaluate the model accuracy through the comparison with real-world LiDAR data.
  - Accepted to KICS domestic conference / GISUP international conference.

## AWARD & HONOR

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

## SKILLS

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

## REFERENCE

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**Prof. Kyungdon Joo**, Professor, UNIST  
Relationship: M.S. advisor  
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