

Kwonyoung Ryu

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scholar

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Education

- 2021 – ongoing  **Ph.D. Pohang University of Science and Technology** in Graduate School of Artificial Intelligence.
Research Interest : Multi-view Image 3D Segmentation, Generalized 3D (LiDAR/Image) perception, Autonomous driving perception, Occupancy Prediction, Feed-forward Gaussian Splatting, Amodal Scene reconstruction
Supervisor : Sunghyun Cho, Co-advisor : Jaesik Park
*Currently working at **Seoul National University** (2023.09 – ongoing, Advisor : Jaesik Park)
- 2019 – 2021  **M.S. Korea Advanced Institute of Science and Technology** in Mechanical Engineering.
Thesis title: *Scanline Resolution-Invariant Depth Completion Using a Single Image and Sparse LiDAR Point Cloud* (Supervisor : Kuk-jin Yoon).
- 2014 – 2019  **B.S. Korea Advanced Institute of Science and Technology** in Mechanical Engineering.

Research Publications

Conference Proceedings

- 1 K. Ryu, I.-J. Lee, J. Jin, H. Lee, J. Lee, and J. Park, “Extending a large view synthesis model for multi-view panoptic segmentation,” in *European Conf. on Computer Vision (ECCV)*, 2026.
- 2 I.-J. Lee, M. Kim, K. Ryu, P. Musacchio, and J. Park, “Openbox: Annotate any bounding boxes in 3d,” in *Int. Conf. on Neural Information Processing Systems (NeurIPS), Highlight*, 2025.
- 3 K. Ryu*, S. Hwang*, and J. Park, “Instant domain augmentation for lidar semantic segmentation,” in *2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023, pp. 9350–9360.

Journal Articles

- 1 K. Ryu, K.-i. Lee, J. Cho, and K.-J. Yoon, “Scanline resolution-invariant depth completion using a single image and sparse lidar point cloud,” *IEEE Robotics and Automation Letters*, vol. 6, no. 4, pp. 6961–6968, 2021.
- 2 T. Kim, K. Ryu, K. Song, and K.-J. Yoon, “Loop-net: Joint unsupervised disparity and optical flow estimation of stereo videos with spatiotemporal loop consistency,” *IEEE Robotics and Automation Letters*, vol. 5, pp. 5597–5604, 2020.

ArXiv

- 1 K. Lee, I.-J. Lee, M. Kwak, K. Ryu, J. Hong, and J. Park, *SpatialMosaic: A Multiview VLM Dataset for Partial Visibility*. 2025, vol. abs/2512.23365. arXiv: 2512.23365.  URL: <https://arxiv.org/abs/2512.23365>
- 2 W. Dong*, K. Ryu*, M. Kaess, and J. Park, *Real-time Registration and Reconstruction with Cylindrical LiDAR Images*. 2021, vol. abs/2112.02779. arXiv: 2112.02779.  URL: <https://arxiv.org/abs/2112.02779>

Miscellaneous Experience

Academic Services

- Conference Reviewer  CVPR(23-26), ECCV(22,24,26), ICRA(22-23), IROS(24-25), NeurIPS(25-26), BMVC(26)
- Reviewer Award  Top Reviewer Awards, NeurIPS 2025

Talk

- 2023.11  Towards Generalizable Perception for LiDAR / outdoor 3D pointcloud, LG AI Seminar

Teaching

- 2022.09  **Teaching Assistant.** Topics in AI:3D Vision, Prof. Jaesik Park
- 2023.03  **Head Teaching Assistant.** Deep Learning, Prof. Namhoon Lee