

Do Gyoon Lee

Machine Learning Engineer, Computer Vision Expert

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EDUCATION

Yonsei University | College of Engineering
MS/Ph.D in Electrical Electronics Engineering

Seoul, Korea
Mar. 2019-Present

Supervised by Prof. Sangyoun Lee
Anticipated Graduation Date: 02/25 (Feb.2025)

Yonsei University | College of Engineering
BE in Electrical Electronics Engineering

Seoul, Korea
Mar.2012-Feb.2019

RESEARCH INTERESTS

Computer Vision & Graphics

- Novel View Synthesis on Static/Dynamic Scene, Implicit Neural Representation
- Recognition and Enhancement based on Image/Video/Point Cloud

Machine Learning & Deep Learning

- Data Augmentation & Regularization
- Supervised Learning, Self-supervised Learning, Unsupervised Learning

PROJECT EXPERIENCE

Auto Labeling Unlabeled Real Point Cloud Data via Semi-supervised Point Cloud Classification

Apr.2021-Present
Korea

Yonsei University | Hyundai Motors

- Project Manager / Researcher
- Led a project developing labeling network that classifies unlabeled real point cloud data using semi-supervised learning.
- Point Cloud Classification, Feature Clustering
- Semi-supervised Learning, Active Learning

3-Dimensional Recognition System for Autonomous Driving with Single- and Sparse Multi-LiDAR.

Mar.2020-Dec.2021
Korea

Yonsei University | Mando Halla Company

- Project Manager / Researcher
- Managed a project constructing a 3-dimensional recognition system for autonomous driving that consists of 3D multi object detection/tracking and motion state decision system in single- and sparse multi-LiDAR environments.
- 3D Object Detection, 3D multi object Tracking, Motion State Decision
- Depth Completion, Channel Attention

Surface Reconstruction of actual 3D space from RGB images for augmented reality

July.2019-Nov.2020
Korea

Yonsei University | ETRI(Electronics and Telecommunications Research Institute)

- Researcher
- Participated in the project that developed the 3D surface reconstruction system from RGB images of a place using instance segmentation, camera odometry and Computational Geometry Algorithms Library(CGAL).
- Instance Segmentation, Video Object Segmentation, Mesh Reconstruction

SELECTED PAPERS

International Conference

[1] **Dogyoon Lee**, Jaeha Lee, Junhyeop Lee, Hyeongmin Lee, Minhyeok Lee, Sungmin Woo, Sangyoun Lee, "Regularization Strategy for Point Cloud via Rigidly Mixed Sample", *IEEE/CVF Computer Vision and Pattern Recognition (CVPR)*, 2021.

[2] Minhyeok Lee, Junhyeop Lee, **Dogyoon Lee**, Woojin Kim, Sangwon Hwang, Sangyoun Lee, "Robust Lane Detection via Expanded Self attention", *IEEE/CVF Winter Conference on Applications of Computer Vision(WACV)*, 2022.

[3] Sungmin Woo, Sangwon Hwang, Woojin Kim, Junhyeop Lee, **Dogyoon Lee**, Sangyoun Lee, "False Positive Removal For 3D Vehicle Detection with Penetrated Point Classifier", *IEEE International Conference on Image Processing(ICIP)*, 2020.

International Journal

[1] Young-Suk Yoon, Sangwon Hwang, **Dogyoon Lee**, Sangyoun Lee, Jae-Won Suh, Sung-Uk Jung, "3D Mesh Transformation Preprocessing System in the Real Space for Augmented Reality Services", *ICT Express*, Mar.2021

PROFESSIONAL ACTIVITIES

Reviewers

- *IEEE/CVF Conference on Computer Vision and Pattern Recognition(CVPR)*, 2022.
- *IEEE/CVF European Conference on Computer Vision(ECCV)*, 2022.

Patents

Apparatus and Method For Correcting Errors of Detected Objects based on Point Cloud, 10-2310790, KR, Oct, 2020.

LANGUAGE

Korean(Native), English(Intermediate)

SKILLS

Programming Language: Python, C, C++, MATLAB

Deep Learning Framework: PyTorch, TensorFlow