Do Gyoon Lee

Machine Learning Engineer, Computer Vision Expert
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EDUCATION

Yonsei University | College of Engineering ***Seoul, Korea***
MS/Ph.D in Electrical Electronics Engineering ***Mar. 2019-Present***

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

Yonsei University | College of Engineering ***Seoul, Korea***
BE in Electrical Electronics Engineering ***Mar.2012-Feb.2019***

RESEARCH INTERESTS

Computer Vision & Graphics

- Novel View Synthesis on Static/Dynamic Scene, Implicit Neural Representation
- Image/Video/Point Cloud Processing

Machine Learning & Deep Learning

- Data Augmentation & Regularization
- Self-supervised Learning, Meta Learning

PROJECT EXPERIENCE

Auto Labeling Unlabeled Real Point Cloud Data via Semi-supervised Point Cloud Classification ***Apr.2021-Present***
Yonsei University | Hyundai Motors *Korea*

- 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***
Yonsei University | Mando Halla Company *Korea*

- 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***
Yonsei University | ETRI(Electronics and Telecommunications Research Institute) *Korea*

- 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.*

LANGUAGE

Korean(Native), English(Intermediate)

SKILLS

Programming Language: Python, C, C++, MATLAB
Deep Learning Framework: PyTorch, TensorFlow