Wonhyeok Choi *Researcher of Computer Vision*

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Contact Information

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Research Interests

Computer Vision (3D perception tasks, Scene Understanding)
Deep Learning (Multi-task Learning, Meta Learning, Dynamic Neural Networks)
Applications - Autonomous driving, AR/VR

Education

M.S. - Ph.D. Integrated Course in Electrical Engineering *Mar. 2022 –*
& Computer Sciences (EECS), DGIST, South Korea *Advisor: Prof. Sunghoon Im*

Bachelor of Convergence Science, DGIST, South Korea *Mar. 2018 – Feb. 2022*

Publications

Wonhyeok Choi*, Mingyu Shin*, Hyukzae Lee, Jaehoon Cho, Jaehyeon Park, Sunghoon Im. "Multi-task Learning for Real-time Autonomous Driving leveraging Task-wise Attention Generator", IEEE International Conference on Robotics and Automation (**ICRA**), Under Review.

Wonhyeok Choi*, Mingyu Shin*, Sunghoon Im. "Depth-discriminative Metric Learning for Monocular 3D Object Detection", Neural Information Processing Systems (**NeurIPS**), Dec 2023.

Wonhyeok Choi, Sunghoon Im. "Dynamic Neural Network for Multi-Task Learning Searching across Diverse Network Topologies", IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), Jun 2023.

Seunghun Lee, **Wonhyeok Choi**, Changjae Kim, Minwoo Choi, Sunghoon Im. "ADAS: A Direct Adaptation Strategy for Multi-Target Domain Adaptive Semantic Segmentation", IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), Jun 2022.

Academic Activities

Reviewer

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR) *2023 –*
- IEEE International Conference on Computer Vision (ICCV) *2023 –*
- IEEE International Conference on Robotics and Automation (ICRA) *2024 –*

Awards

- Grand Prize, Autonomous Driving AI Development Challenge, *Oct. 2023*
  — Ministry of Land, Infrastructure and Transport
- Participation Prize, 28th HumanTech Paper Award, *Feb. 2022*
  — Samsung Electronics Co., Ltd.

Skills

Languages: Python, C, C++, C#
Theory: Type theory, Operation systems, Data structures, and Computer algorithms.
Development: Pytorch, HTML, CSS

Patents

Registration

- METHOD FOR ESTIMATING DEPTH FROM MONOCULAR CAMERA IMAGES,
  Publication date: Jul. 26, 2023. (10-2023-0087465)
- METHOD AND APPARATUS FOR MULTI-TASK LEARNING,
  Publication date: Feb. 17, 2023 (10-2023-0021790)
- METHOD AND APPARATUS FOR DOMAIN ADAPTATION,
  Publication date: Jul. 14, 2022 (10-2022-0087222)
- METHOD AND APPARATUS FOR DOMAIN ADAPTATION,
  Publication date: Jul. 13, 2022 (10-2022-0086614)