Jumin Lee

Ph.D. Candidate

✉ jmlee@kaist.ac.kr | ⌂ zoomin-lee.github.io/ | ⌗ zoomin-lee

Research Interest

My research interests are in 3D vision and computer vision. I am interested in generating 3D scenes with diffusion models as world models for autonomous driving, etc. My future research includes generating 3D scenes with temporal consistency.

Education

KAIST(Korea Advanced Institute of Science and Technology) *Daejeon, S.Korea*
Ph.D in School of Computing *Mar. 2024 - Current*

- Advisor: Sung-Eui Yoon

KAIST(Korea Advanced Institute of Science and Technology) *Daejeon, S.Korea*
M.S. in Artificial Intelligence *Mar. 2022 - Mar. 2024*

- Advisor: Sung-Eui Yoon
- GPA: 4.04/4.3

Sung Kyun Kwan University *Suwon, S.Korea*
B.S. in Applied Artificial Intelligence and Mechanical Engineering *Mar. 2017 - Mar. 2022*

- GPA: 4.02/4.5

Publication

SemCity: Semantic Scene Generation with Triplane Diffusion

Jumin Lee*, Sebin Lee*, Changho Jo, Woobin Im, Juhyeong Seon, and Sung-Eui Yoon

- Computer Vision and Pattern Recognition(CVPR), 2024.
- 136 stars on `https://github.com/zoomin-lee/SemCity`

Extending Segment Anything Model into Auditory and Temporal Dimensions for Audio-Visual Segmentation

Juhyeong Seon, Woobin Im, Sebin Lee, **Jumin Lee**, and Sung-Eui Yoon

- International Conference on Image Processing(ICIP), 2024.

Diffusion Probabilistic Models for Scene-Scale 3D Categorical Data *Oral Paper*

Jumin Lee, Woobin Im, Sebin Lee, and Sung-Eui Yoon

- Image Processing and Image Understanding(IPIU), 2023.
- 156 stars on `https://github.com/zoomin-lee/scene-scale-diffusion`

Work Experience

Computer Vision and Artificial Intelligence Lab, AICT *Suwon, S.Korea*
Intern *Oct. 2020 Dec. 2020*

- Research 3D Object Detection with Stereo Vision.

Awards

2023   **Grand Prize**, The Korea Institute of Broadcast and Media Engineers, IPIU Organizing Committee

2020   **Encouragement Prize**, Director, Institute of AICT(Advanced Institute of Convergence Technology)

2019   **Grand Prize**, Autonomous Vehicle Competition for University Students, Sungkyunkwan University