

Chanyoung Kim

Curriculum Vitae

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RESEARCH INTERESTS

Computer Vision, Unsupervised Open-Vocabulary Image and Video Semantic Segmentation, Multi-modal Image Synthesis, Audio-Visual Representation

EDUCATION

Yonsei University

Ph.D. Student in Artificial Intelligence

Advisor : **Prof. Seong Jae Hwang**

Seoul, Republic of Korea

Sep. 2023 – Aug. 2028 (Exp.)

Sejong University

B.S. in Intelligent Mechatronics Engineering

Seoul, Republic of Korea

Mar. 2017 – Feb. 2023

PUBLICATIONS (* Equal contribution)

- [1] **Chanyoung Kim**, D. Ju, W. Han, M. Yang, S. J. Hwang, “[Distilling Spectral Graph for Object-Context Aware Open-Vocabulary Semantic Segmentation](#)”, *CVPR 2025* [PDF]
- [2] W. Han, Y. Lee, **Chanyoung Kim**, S. J. Hwang, “[Spatial Transport Optimization by Repositioning Attention Map for Training-Free Text-to-Image Synthesis](#)”, *CVPR 2025* [PDF]
- [3] **Chanyoung Kim***, W. Han*, D. Ju, S. J. Hwang, “[EAGLE: Eigen Aggregation Learning for Object-Centric Unsupervised Semantic Segmentation](#)”, *CVPR 2024* (**Highlight**, AR $\leq 2.8\%$) [PDF]
- [4] W. Han*, **Chanyoung Kim***, D. Ju, Y. Shim, S. J. Hwang, “[Advancing Text-Driven Chest X-Ray Generation with Policy-Based Reinforcement Learning](#)”, *MICCAI 2024* (**Spotlight**, AR $\leq 3.4\%$) [PDF]
- [5] W. Roh, G. Chang, S. Moon, G. Nam, **Chanyoung Kim**, Y. Kim, J. Kim, S. Kim, “[ORA3D: Overlap Region Aware Multi-view 3D Object Detection](#)”, *BMVC 2022* [PDF]
- [6] S. H. Lee, G. Oh, W. Byeon, **Chanyoung Kim**, W. Ryoo, S. H. Yoon, H. Cho, J. Bae, J. Kim, S. Kim, “[Sound-Guided Semantic Video Generation](#)”, *ECCV 2022* [PDF]
- [7] S. H. Lee, W. Roh, W. Byeon, S. H. Yoon, **Chanyoung Kim**, J. Kim, S. Kim, “[Sound-Guided Semantic Image Manipulation](#)”, *CVPR 2022* [PDF]

PREPRINTS

- [8] **Chanyoung Kim***, D. Ju*, J. Kim, W. Han, R. Alcover-Couso, S. J. Hwang, “[Pathology-Aware Adaptive Watermarking for Text-Driven Medical Image Synthesis](#)”, *arXiv Preprint* [PDF]
- [9] D. Kim, H. Ko, **Chanyoung Kim**, S. J. Hwang, “[Fourier Decomposition for Explicit Representation of 3D Point Cloud Attributes](#)”, *arXiv Preprint* [PDF]
- [10] S. H. Lee*, **Chanyoung Kim***, W. Byeon, S. H. Yoon, J. Kim, S. Kim, “[LISA: Localized Image Stylization with Audio via Implicit Neural Representation](#)”, *arXiv Preprint* [PDF]

WORKSHOP PUBLICATIONS

- [11] **Chanyoung Kim***, W. Han*, D. Ju, S. J. Hwang, “[EAGLE: Eigen Aggregation Learning for Object-Centric Unsupervised Semantic Segmentation](#)”, *CVPRW 2024 - Causal and Object-Centric Representations for Robotics*
- [12] S. H. Lee, N. Lee, **Chanyoung Kim**, W. Ryoo, J. Kim, S. H. Yoon, S. Kim, “[Audio-Guided Image Manipulation for Artistic Paintings](#)”, *NeurIPSW 2022 - ML for Creativity and Design*

RESEARCH EXPERIENCE

Medical Imaging & Computer Vision Lab @ Yonsei University

Mar. 2023 – Present

Advisor: **Prof. Seong Jae Hwang**

- Semantic Segmentation (*collaborating with Prof. Ming-Hsuan Yang @ UC Merced & Google DeepMind*)

- Multi-modal Image Synthesis

Computer Vision Lab @ Korea University

Feb. 2021 – Dec. 2022

Undergrad Research Intern

- Multi-modal Representation Learning (*collaborated with Dr. Wonmin Byeon @ NVIDIA Research*)
- 3D Computer Vision with Event Camera (*collaborated with Dr. Giljoo Nam @ Meta Reality Lab*)

ACADEMIC SERVICE

Conference (Workshop) Organizer

- *MICCAI 2025 Student Board - Local Student Liaison Officer*

Conference Reviewer

- *IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR) 2024, 2025*
- *IEEE/CVF International Conference on Computer Vision (ICCV) 2025*
- *European Conference on Computer Vision (ECCV) 2024*
- *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) 2023, 2025*

SKILLS

Programming

- Fluent in Python, Deep Learning Frameworks (Pytorch, Pytorch Lightning, TensorFlow), Python Libraries (Diffusers, Hugging Face, MMCV, Scikit-Learn, etc), Shell Script, Git, L^AT_EX
- Have foundation for C, Photoshop

Languages

- Native speaker in Korean
- Fluent in English (*2 years at Mckinley School, Pasadena, CA, United States (2006 – 2008)*)

TEACHING EXPERIENCE

Yonsei University

Sep. 2023 – Present

- Teaching Assistant: “Deep Learning Introduction and Applications” (Spring 2024, 2025)
- Teaching Assistant: “Computer Vision” (Fall 2023)

PROJECT EXPERIENCES

Detecting TMJ MRI Abnormalities Using TMJ Tomographic Imaging

Sep. 2023 – Present

- Won the **Best Oral Presentation Award** at The American Academy of Orofacial Pain Conference 2024.
- Funded by *National Research Foundation of Korea (NRF)* and *Yonsei University*.

Personal Privacy Free Autonomous Flight Drone Platform with Event Camera

Jul. 2021 – Feb.2022

- Funded by *National Research Foundation of Korea (NRF)* and *George Washington University*.

Ultra-Light Weight Image Classification Model for Edge Computing Systems

Feb. 2021 – Jun. 2021

- Developed light weight food image classification model for GE Appliances oven.
- Funded by *GE Appliances*.

AWARDS & HONORS

Excellent Academic Paper Award (Fall 2024)

Yonsei University Jan. 2025

LAB Start-up 2022

1st / 12 teams Feb. 2022

Korea University π -ville Demo Day 2021

2nd / 13 teams Sep. 2021

Sejong Scholarship for Outstanding GPA

3rd / 142 people Sep. 2021

Seoul PM Hackathon

5th / 62 teams Jun. 2019

XXIII Pyeongchang Olympic Winter Games

Medal of Contribution Feb. 2018

REFERENCES

Prof. Seong Jae Hwang (*PhD Advisor*)

Associate Professor at Yonsei University

Prof. Ming-Hsuan Yang

Research Scientist & Professor at Google DeepMind & UC Merced

Dr. Wonmin Byeon

Research Scientist at NVIDIA Research

Dr. Roberto Alcover-Couso

Applied Scientist at Amazon