

# Chanyoung Kim

## Curriculum Vitae

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### RESEARCH INTERESTS

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

### EDUCATION

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#### Yonsei University

*Ph.D. Student in Artificial Intelligence*

Advisor : **Prof. Seong Jae Hwang**

Seoul, Republic of Korea

*Sep. 2023 – Present*

#### Sejong University

*B.S. in Intelligent Mechatronics Engineering*

Seoul, Republic of Korea

*Mar. 2017 – Feb. 2023*

### PUBLICATIONS (\* Equal contribution)

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- [1] **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]
- [2] 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]
- [3] 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]
- [4] 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]
- [5] 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

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- [6] **Chanyoung Kim**, D. Ju, W. Han, M. Yang, S. J. Hwang, “**Distilling Spectral Graph for Object-Context Aware Open-Vocabulary Semantic Segmentation**”, *arXiv Preprint* [PDF]
- [7] 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

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- [8] **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*
- [9] 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

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#### 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

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### Conference Reviewer

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

## SKILLS

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### Programming

- Fluent in Python, Deep Learning Frameworks (Pytorch, Pytorch Lightning, TensorFlow), Python Libraries (Diffusers, Hugging Face, MMCV, Scikit-Learn, etc), Shell Script, Git, L<sup>A</sup>T<sub>E</sub>X
- 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

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### Yonsei University

Sep. 2023 – Present

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

## PROJECT EXPERIENCES

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### 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

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### LAB Start-up 2022

*1st / 12 teams* Feb. 2022

### Korea University $\pi$ -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

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**Prof. Seong Jae Hwang** (*PhD Advisor*)

Assistant Professor at Yonsei University, Seoul, S.Korea

**Prof. Ming-Hsuan Yang**

Research Scientist & Professor at UC Merced & Google DeepMind

**Dr. Wonmin Byeon**

Research Scientist at NVIDIA Research, Santa Clara, CA