

# Chanyoung Kim

## Curriculum Vitae

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### RESEARCH INTERESTS

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Machine learning, Deep learning, Computer vision  
Semantic Segmentation, Multi-modal representation learning

### EDUCATION

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#### Yonsei University

*M.S. in Dept. of Artificial Intelligence*

Advisor : **Prof. Seong Jae Hwang**

Seoul, Republic of Korea

*Sep. 2023 – Present*

#### Sejong University

*B.S. in Intelligent Mechatronics Engineering*

(2 years of absence for mandatory military service)

Seoul, Republic of Korea

*Mar. 2017 – Feb. 2023*

### PUBLICATIONS (\* Equal contribution)

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- [1] **C.Kim\***, W.Han\*, D.Ju, S.J.Hwang, “**EAGLE: Eigen Aggregation Learning for Object-centric Unsupervised Semantic Segmentation**”, *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2024 (Highlights, top 11% of accepted papers)* [PDF]
- [2] W.Roh, G.Chang, S.Moon, G.Nam, **C.Kim**, Y.Kim, S.Kim, J.Kim, “**ORA3D: Overlap Region Aware Multi-view 3D Object Detection**”, *The British Machine Vision Conference (BMVC), 2022* [PDF]
- [3] S.H.Lee, G.Oh, W.Byeon, **C.Kim**, W.J.Ryoo, H.Choi, S.H.Yoon, J.Bae, J.Kim, S.Kim, “**Sound-Guided Semantic Video Generation**”, *European Conference on Computer Vision (ECCV) 2022* [PDF]
- [4] S.H.Lee, W.Roh, W.Byeon, S.H.Yoon, **C.Kim**, J.Kim, S.Kim, “**Sound-Guided Semantic Image Manipulation**”, *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2022* [PDF]

### WORKSHOP PUBLICATIONS

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- [5] S.H.Lee, N.Lee, **C.Kim**, W.Ryoo, J.Kim, S.Yoon, S.Kim “**Audio-Guided Image Manipulation for Artistic Paintings**”, *NeurIPS 2022-Machine Learning for Creativity and Design Workshop*

### PREPRINTS (\* Equal contribution)

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- [6] W.Han\*, **C.Kim\***, D.Ju, Y.Shim, S.J.Hwang, “**Advancing Text-Driven Chest X-Ray Generation with Policy-Based Reinforcement Learning**”, *arXiv 2024* [PDF]
- [7] S.H.Lee\*, **C.Kim\***, W.Byeon, S.H.Yoon, J.Kim, S.Kim, “**LISA: Localized Image Stylization with Audio via Implicit Neural Representation**”, *arXiv 2022* [PDF]

### RESEARCH EXPERIENCE

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#### Medical Imaging & Computer Vision Lab @ Yonsei University

Mar. 2023 – Present

Advisor: **Prof. Seong Jae Hwang**

- Semantic Segmentation
- Multi-modal Image Synthesis

#### Computer Vision Lab @ Korea University

Feb. 2021 – Dec. 2022

Advisors: **Prof. Jinkyu Kim** and **Prof. Sangpil Kim**

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

### ACADEMIC SERVICE

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#### Conference Reviewer

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

## TEACHING EXPERIENCE

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### Yonsei University

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

### Elice - Samsung Electronics

Aug. 2023

- Lecturer: Data Analysis and AI Course for Samsung Electronics Executives and Employees

### Elice - LOTTE Corporation

Apr. 2023

- Teaching Assistant: Python Course for LOTTE Group Executives and Employees

### LG CNS

Jul. 2021, Mar. 2022

- Teaching Assistant: Anomaly Detection Course for LG CNS Executives and Employees

## PROJECT EXPERIENCES

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### Personal Privacy Free Autonomous Flight Drone Platform with Event Vision

Jul. 2021 – Feb.2022

- Funded by National Research Foundation of Korea (NRF) and GWU, Washington D.C., USA

### Real-time Object Detection for Embedded Systems on Drones

Sep. 2021 – Dec. 2021

- Proposed a light-weight object detector for drone vision.

### Ultra-Light Weight Image Classification Model for Edge Computing Systems

Feb. 2021 – Jun. 2021

- Developed light weight food image classification model for oven.
- Funded by GE Appliances a Haier company

## AWARDS & HONORS

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### LAB Start-up 2022

*1st Place* Feb. 2022

### Sejong Scholarship for Outstanding GPA

*3rd Place* Sep. 2021

### 2020 International Robot Contest

*5th Place* Nov. 2020

### Seoul PM Hackathon

*5th Place* Jun. 2019

### XXIII Pyeongchang Olympic Winter Games

*Medal of Contribution* Feb. 2018

## SKILLS

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### Programming

- Fluent in Python, Deep Learning Frameworks (Pytorch, Pytorch Lightning, TensorFlow), Python Libraries (Diffusers, Hugging Face, 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)*)