

Chanyoung Kim

Curriculum Vitae

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RESEARCH INTERESTS

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

EDUCATION

Yonsei University

M.S. / Ph.D. in 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)

- [1] W.Han*, **C.Kim***, D.Ju, Y.Shim, S.J.Hwang, “Advancing Text-Driven Chest X-Ray Generation with Policy-Based Reinforcement Learning”, *MICCAI 2024* (Early Accepted, top 11% of submissions) [PDF]
- [2] **C.Kim***, W.Han*, D.Ju, S.J.Hwang, “EAGLE: Eigen Aggregation Learning for Object-Centric Unsupervised Semantic Segmentation”, *CVPR 2024* (Highlight, top 2.8% of submissions) [PDF]
- [3] 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”, *BMVC 2022* [PDF]
- [4] 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”, *ECCV 2022* [PDF]
- [5] S.H.Lee, W.Roh, W.Byeon, S.H.Yoon, **C.Kim**, J.Kim, S.Kim, “Sound-Guided Semantic Image Manipulation”, *CVPR 2022* [PDF]

WORKSHOP PUBLICATIONS

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

PREPRINTS

- [8] 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

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

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*

TEACHING EXPERIENCE

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 - Korea University

Jul. 2021, Mar. 2022

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

PROJECT EXPERIENCES

Personal Privacy Free Autonomous Flight Drone Platform with Event Vision

Jul. 2021 – Feb. 2022

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

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*

AWARDS & HONORS

LAB Start-up 2022

1st Place Feb. 2022

Korea University π -ville Demo Day 2021

2nd Place Sep. 2021

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

Programming

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