Chanyoung Kim

Curriculum Vitae

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Research Interests

Deep Learning, Computer Vision, Unsupervised Open-Vocabulary Image and Video Semantic Segmentation, Multi-modal Image Synthesis Including Medical Images, Audio-Visual Representation

EDUCATION

Yonsei University

2nd Year Ph.D. Student in Artificial Intelligence Advisor : Prof. Seong Jae Hwang

Sejong University

Seoul, Republic of Korea

Mar. 2017 - Feb. 2023

Sep. 2023 - Aug. 2028 (Expected)

Seoul, Republic of Korea

B.S. in Intelligent Mechatronics Engineering

PUBLICATIONS (* Equal contribution)

[1] Chanyoung Kim^{*}, W. Han^{*}, D. Ju, S. J. Hwang, "EAGLE: Eigen Aggregation Learning for Object-Centric Unsupervised Semantic Segmentation", CVPR 2024 (Highlight, AR < 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 < 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

[6] 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 2022 [PDF]

WORKSHOP PUBLICATIONS

[7] 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

[8] 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 Advisor: Prof. Seong Jae Hwang

- Semantic Segmentation (collaborating with Prof. Ming-Hsuan Yang @ Google DeepMind & UC Merced)
- Multi-modal Image Synthesis

Computer Vision Lab @ Korea University

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)

Mar. 2023 – Present

Feb. 2021 – Dec. 2022

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

Programming

- Fluent in Python, Deep Learning Frameworks (Pytorch, Pytorch Lightning, TensorFlow), Python Libraries (Diffusers, Hugging Face, MMCV, Scikit-Learn, etc), Shell Script, Git, LATEX
- 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

Wonmin Byeon

Yonsei University	Sep. $2023 - Present$
Teaching Assistant: "Deep Learning Introduction and ApplicationTeaching Assistant: "Computer Vision", (Fall 2023)	as" (Spring 2024)
Elice - Samsung Electronics	Aug. 2023
• Lecturer: Data Analysis and AI Course for Samsung Electronics E	Executives and Employees
Elice - LOTTE Corporation	Apr. 2023
• Teaching Assistant: Python Course for LOTTE Group Executives	s and Employees
LG CNS - Korea University	Jul. 2021, Mar. 2022
• Teaching Assistant: Anomaly Detection Course for LG CNS Exec	utives and Employees
Project Experiences	
Detecting TMJ MRI Abnormalities Using TMJ Tomographic ImagingSep. 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 oven. Funded by <i>GE Appliances</i>	
Awards & Honors	
LAB Start-up 2022	<i>1st / 12 teams</i> Feb. 2022
Korea University π -ville Demo Day 2021	2nd / 13 teams Sep. 2021
Sejong Scholarship for Outstanding GPA	<i>3rd / 142 people</i> Sep. 2021
Seoul PM Hackathon	5th / 62 teams Jun. 2019
XXIII Pyeongchang Olympic Winter Games	<i>Medal of Contribution</i> Feb. 2018
References	
Seong Jae Hwang (PhD Advisor) Assistant Professor at Yonsei University, Seoul, S.Korea	
Ming-Hsuan Yang Research Scientist & Professor at Google DeepMind and UC Merced	

ıg. Research Scientist at NVIDIA Research, Santa Clara, CA