

Myungsub Choi

STAFF ENGINEER · COMPUTER VISION RESEARCHER · LLM/RAG DEVELOPER

130, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16678, Korea.

☎ (+82) 10-9999-8736 | ✉ cms6539@gmail.com | 🏠 myungsub.github.io | 📱 myungsub | 🌐 myungsub-choi

Summary

Versatile problem solver with deep experience across AI domains — from low-level vision and sensor modeling to vision-language models and large-scale LLM/RAG systems. Currently a Staff Engineer at Samsung AI Center, leading a lean team building multimodal retrieval-augmented generation applications for internal knowledge management. I focus on translating complex technical ideas into practical solutions, often navigating ambiguity, collaborating across teams, and aligning engineering efforts with real-world needs. My past work includes research at Google and Snap, consistently bridging the gap between innovation and application - always with a focus on building systems that matter in the real world.

Education

Seoul National University (SNU)

Seoul, S. Korea

PH.D., ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Mar. 2013 - Feb. 2021

- Integrated Master & Ph.D in EECS
- Thesis: Test-Time Adaptation Methods for Video Frame Interpolation
- Advisor: Prof. Kyoung Mu Lee

Seoul National University (SNU)

Seoul, S. Korea

B.S., ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Mar. 2009 - Feb. 2013

- Cumulative GPA: 3.48 / 4.30

Technical Skills

Frameworks & Deployment

PyTorch, TensorFlow, FastAPI, Hugging Face (diffusers, transformers), DeepSpeed, vLLM, Gradio

Programming Languages

Python, C++, MATLAB

Languages

Korean (native), English (fluent)

Work Experience

Samsung Electronics, DS Division, AI Center (formerly SAIT, AI Research Center)

Seoul, S.Korea

STAFF ENGINEER

May 2022 - Present

- AI Agent (Jun 2024 – Present): Built a multimodal Retrieval-Augmented Generation (RAG) application for internal knowledge management, improving efficiency in accessing distributed information across teams.
- AI ISP (Jan 2024 - May 2024): Designed and trained a natural language-based Image Quality Assessment (IQA) model, enabling intuitive and context-aware image evaluations.
- AI ISP (May 2022 - Dec 2023): Developed an efficient dual-pixel autofocus model optimized for low-light environments, improving focusing speed and accuracy.

Google Research

Seoul, S.Korea

VISITING RESEARCHER

Apr. 2021 - Apr. 2022

- Conducted research on vision-language models for controllable image editing guided by natural language instructions.
- Proposed a novel approach using conditional classifier-free guidance to enhance editing fidelity and semantic alignment.
- Published at ECCV 2022; contributed to broader research on multimodal generative modeling.

Snap Inc.

Venice, California, United States

RESEARCH INTERN

Jun. 2018 - Aug. 2018

- Developed deep learning models for efficient and high-quality video frame interpolation.
- Designed and implemented the SNU-FILM benchmark dataset for analytic evaluation.

Honors & Awards

2021 **Bronze Prize**, The 27th Humantech Paper Award, Samsung Electronics

Suwon, S.Korea

2020 **Outstanding Project Award**, VTT 2020 Research Highlights, Korean Governmental Project

Seoul, S.Korea

2020 **Research Award**, Hyundai NGV

Seoul, S.Korea

2019 **Runner-up (2nd place) Award**, AIM 2019 Challenge on Video Temporal Super-Resolution, ICCV Workshops

Seoul, S.Korea

Publications (Selected)

- Sangwon Lee, **Myungsub Choi**, Nagyeong Lee, and Hyong-Euk Lee, “Stable Autofocus with Focal Consistency Loss”, *Winter Conference on Applications of Computer Vision (WACV)*, 2025 (Oral Presentation)
- **Myungsub Choi**, Hana Lee, and Hyong-Euk Lee, “Exploring positional characteristics of dual-pixel data for camera autofocus”, *Proc. International Conference on Computer Vision (ICCV)*, 2023
- **Myungsub Choi**, “Referring object manipulation of natural images with conditional classifier-free guidance”, *European Conference on Computer Vision (ECCV)*, 2022
- **Myungsub Choi**, Janghoon Choi, Sungyong Baik, Tae Hyun Kim, and Kyoung Mu Lee, “Test-Time Adaptation for Video Frame Interpolation via Meta-Learning,” *IEEE Trans. Pattern Analysis and Machine Intelligence (TPAMI, IF: 20.8)*, 2021
- **Myungsub Choi**, Heewon Klm, Bohyung Han, Ning Xu, and Kyoung Mu Lee, “Channel Attention Is All You Need for Video Frame Interpolation,” *AAAI Conference on Artificial Intelligence*, 2020

Extracurricular Activity

Industry Collaboration Projects (Graduate School)

Seoul, S.Korea

CORE CONTRIBUTOR

- | | |
|---|---------------------|
| • <i>Joint Medical Image & Reports Analysis with Deep Learning</i> , NRF (National Research Foundation) | Mar 2017 - Feb 2018 |
| • <i>Small Object Detection for Road Scene Analysis</i> , SIC Center, LG Electronics | Apr 2017 - Dec 2017 |
| • <i>DNN based Traffic Sign Detection and Recognition</i> , SIC Center, LG Electronics | Feb 2016 - Dec 2016 |
| • <i>Semantic Segmentation for Road Scene Analysis with Deep Learning</i> , SAIT, Samsung Electronics | May 2015 - Apr 2016 |
| • <i>Semantic Segmentation for Efficient Scene Analysis</i> , DMC R&D Center, Samsung Electronics | May 2014 - Dec 2014 |

Awesome-RNN (★ 6k+)

Seoul, S.Korea

MAIN CONTRIBUTOR

Jun 2015 - Apr 2017

- Curated and maintained a popular list of resources for Recurrent Neural Networks, widely used by deep learning practitioners and students.

Awesome-Deep-Vision (★ 10k+)

Seoul, S.Korea

CONTRIBUTOR

May 2015 - Mar 2017

- Contributed to one of the most widely-referenced curated repositories of deep learning resources for computer vision.