

Sangwoo Youn

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Education

KAIST (Korea Advanced Institute of Science and Technology), Daejeon, South Korea
BS Candidate in School of Computing March 2021 – Present

- Current GPA: 3.88 / 4.3

Research Interests

Computer Vision, Generative Models, Vision Language Models

Research Experience

Research Intern at KAIST Visual AI Group June 2025 – Present
Advisor: Prof. Minhyuk Sung, School of Computing, KAIST

- Conducting research on "Vision Language Models".

KAIRI (KAIST AI Research Internship) June 2023 – Aug 2023
CVML Lab (Advisor: Prof. Hyunjung Shim), Graduate School of AI, KAIST

- Investigated "Detection of synthetic images generated by diffusion models."

SK Telecom AI Fellowship June 2023 – Oct 2023

- Conducted research on "Screen Size Adaptive Video Retargeting."
- Awarded Grand Prize (1st Place) for outstanding research (Nov 2023).

Publications

1. Toward Ambulatory Vision: Learning Visually-Grounded Active View Selection
Juil Koo*, Daehyeon Choi*, **Sangwoo Youn***, Phillip Y. Lee, Minhyuk Sung
Preprinted arxiv 2025
(* Equal Contribution)
2. IN2OUT: Fine-Tuning Video Inpainting Model for Video Outpainting Using Hierarchical Discriminator
Sangwoo Youn, Minji Lee, Nokap Tony Park, Yeonggyoo Jeon, Taeyoung Na
IEEE International Conference on Image Processing (ICIP) 2025

Patents

- Sangwoo Youn, et al. "Method and Device for Generating Outer Portion of Video in Order to Change Video Aspect Ratio"
 - Republic of Korea Patent Application No. 10-2023-0146436, Filed October 30, 2023.
 - PCT International Application No. PCT/KR2024/016367, Filed October 25, 2024.
- Sangwoo Youn, et al. "Method and Apparatus for Training Video Outpainting Model"
 - Republic of Korea Patent Application No. 10-2024-0196034, Filed 2024.

Work Experience

Republic of Korea Army Headquarters Dec 2023 – June 2025
Software Engineer (Sergeant)

- Developed Robotic Process Automation (RPA) solutions to enhance administrative efficiency within the Army, leading to a commendation.
- Led the end-to-end development of the ROK Army Chatbot, improving information accessibility for military personnel, an effort recognized with a commendation.

Awards and Honors

- **Grand Prize (1st Place) for Outstanding Research**, SKT AI Fellowship Nov 2023
- **Commendation (Lieutenant General)**, Army Headquarters Sep 2024
For meritorious contribution to Robotic Process Automation (RPA) development.
- **Commendation (Brigadier General)**, Army Headquarters Apr 2025
For meritorious contribution to ROK Army Chatbot development.

Relevant Courses

CS

Introduction to Linear Algebra, Discrete Mathematics, Introduction to Algorithms, System Programming, Introduction to Database, Programming Language, Computer Organization

AI

Basics of Artificial Intelligence (Big Data Analysis and Machine Learning), Machine Learning, Intelligent Robot Design and Programming, Introduction to Data Science, Introduction to Artificial Intelligence, Special Topics in Computer Science (Generative AI for society), Machine Learning for AI, Programming for AI

Certifications

- Big Data Analysis Engineer Korea Data Agency (KDATA) Dec 2024
- SQL Developer (SQLD) Korea Data Agency (KDATA) June 2024

Skills

- **Programming Languages:** Python, C++, Java, SQL
- **Frameworks & Libraries:** PyTorch, TensorFlow, Scikit-learn, OpenCV
- **Developer Tools:** Git, Docker, Linux