

Youngwook Kim

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EDUCATION

Seoul National University (SNU) Mar. 2021 – Aug. 2027 (Expected)
B.S. in Earth and Environmental Sciences (Major)
B.S. in Computer Science and Engineering (Double Major) Seoul, South Korea

GPA: 4.0 / 4.3

RESEARCH INTERESTS

- Computer Vision, Signal Processing, AI for Science

RESEARCH EXPERIENCE

VGI (Visual & Geometric Intelligence) Lab, SNU Jan. 2026 – Jun. 2026
Undergraduate Research Intern (Advisor: Prof. Jaesik Park) Seoul, South Korea

- Conducted research on dynamic scene reconstruction with 4D Gaussian Splatting (4DGS), focusing on systematic analysis of existing methods and their design choices.
- Analyzed the spatiotemporal distribution of learned 4D Gaussians and the training dynamics of the color corrector module, contributing to key design insights underlying 4DGS performance.

ACE (AI Climate & Environment) Lab, SNU Jul. 2025 – Aug. 2025
Undergraduate Research Intern (Advisor: Prof. Yoo-Geun Ham) Seoul, South Korea

- Conducted research on improving spatial sharpness in precipitation prediction using a global–local frequency-based composite loss.
- Developed a hybrid loss function by integrating Fourier Amplitude and Coherence Loss (FACL) with a newly designed Wavelet Amplitude and Coherence Loss (WACL) based on the Dual Tree Complex Wavelet Transform (DTCWT).

PUBLICATIONS

Lucas Yunkyu Lee*, Soonho Kim*, **Youngwook Kim**, Sangmin Kim, Jaesik Park, “FreeTimeGS++: Secrets of Dynamic Gaussian Splatting and Their Principles”, *arXiv*, 2026. [arXiv]

Subin An, **Youngwook Kim**, Dongjin Cho, Yoo-Geun Ham, “Toward Spatially Sharper Precipitation Prediction via Global-Local Frequency Guidance”, *npj Climate and Atmospheric Science*, under revision, 2026. [Preprint]

*Equal contribution.

PROJECTS

Campus Notice Recommendation Service SNU Generative AI Application Contest
Backend Developer Oct. 2025 – Nov. 2025

Designed an AI based recommendation system to address the fragmented campus notice ecosystem at SNU, responsible for building the semantic retrieval pipeline and backend API.

Privacy-Aware Data Visualization Service

Frontend Developer

KFAS Forest of Talent Project

Feb. 2025 – Feb. 2026

Developed a service to reduce the practical cost of personal data self-management, enabling individuals to visualize and control their own information with minimal friction.

Wind Power Generation Forecasting

Machine Learning Engineer

Korea East-West Power Contest

May. 2025 – Nov. 2025

Built a hybrid forecasting model combining physical power curves with residual ensemble learning.

Solar Power Forecasting and ESS Optimization SNU AI Hackathon on Renewable Energy and Big Data Innovation

Machine Learning Engineer

Aug. 2025

Designed profit-oriented ESS operation strategies using solar forecasting and constrained optimization.

HONORS AND AWARDS

Scholarships

Merit-based Scholarship, Seoul National University (Spring 2026)

Korea Foundation for Advanced Studies (KFAS) Forest of Talent, 4th Cohort (Feb. 2025 – Feb. 2026)

Merit-based Scholarship, Seoul National University (Spring 2025)

Academic Excellence Scholarship, School of Earth and Environmental Sciences (Fall 2024)

Awards

Best Project Award, Korea Foundation for Advanced Studies (KFAS) (Feb. 2026)

Grand Prize, SNU Generative AI Application Contest (Nov. 2025)

Second Prize, Korea East-West Power Wind Power Forecasting Contest (Nov. 2025)

Grand Prize, SNU AI Hackathon on Advanced Energy and Big Data Innovation (Aug. 2025)

SKILLS

Programming: Python, R, Java.

Framework/Tools: PyTorch, NumPy, OpenCV, Git.

Languages: Korean (native), English; OPIc: AL.

OTHER ACTIVITIES

SNU Buddy (Fall 2024) Supported exchange students and cultural programs (SNU Office of International Affairs, OIA).

KATUSA, 8th U.S. Army (Nov. 2022 – May. 2024) Completed mandatory military service within the U.S. Army, serving in a medical administrative role at Camp Walker, Daegu.

ICT Education Volunteer (Fall 2021 & Spring 2022) Conducted coding and appropriate-technology education for Ulleung High School students (SNU Social Responsibility, SNUSR).