GEUNHYEOK YU

Ph.D. Student

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📍 Yongin-si, Republic of Korea

SUMMARY

Talented student with industrious and systematic approach to learning information. Open and clear worker with disciplined execution and methodical nature. Extensive knowledge of research and software skills.

RESEARCH INTERESTS

- Computer Vision
- Artificial Intelligence
- Representation Learning
- Model Compression

EDUCATION

Mar. 2024 – Present

Kyung Hee University, Republic of Korea — Yongin-si, Korea
Ph.D. course in Department of Software Convergence
Artificial Intelligence and Robotics Lab. supervised by Prof. Hyoseok Hwang

Mar. 2022 – Feb. 2024

Kyung Hee University, Republic of Korea — Yongin-si, Korea
M.S. course in Department of Software Convergence
Artificial Intelligence and Robotics Lab. supervised by Prof. Hyoseok Hwang

Mar. 2018 – Feb. 2022

Gachon University, Republic of Korea — Seongnam-si, Korea
B.S. course in Department of Software

EXPERIENCE

Sep. 2024 – Mar. 2025

Internship Student — Naver Labs Corp., Korea
- Research on knowledge distillation for vision foundation model compression.
`Deep Learning  /  Knowledge Distillation  /  Representation Learning`

Mar. 2022 – Present

Ph.D./M.S. Student Researcher — AIRLab, Kyung Hee University, Korea
- "Real-Time Automated Solubility Screening Method Using Deep Neural Networks with Handcrafted Features"
- "Generative Perturbation Network for Universal Adversarial Attacks on Brain-Computer Interfaces"
- "D-BADGE: Decision-based Adversarial Batch Attack with Directional Gradient Estimation"
- "A2XP: Towards Private Domain Generalization"
`PyTorch  /  Deep Learning  /  Probabilistics  /  Linear Algebra`

Mar. 2022 – Present

Teaching Assistant — Dept. of Software Convergence, Kyung Hee University, Korea
- Web/Python Programming (SWCON10400, Fall Sem. 2025.)
- Game Graphics Programming (SWCON31100, Spring Sem. 2025.)
- Reinforcement Learning (SWCON495-00, Fall Sem. 2024.)
- Web/Python Programming (SWCON104-01, Spring & Fall Sem. 2023.)
- Robot Programming (SWCON331-00, Fall Sem. 2022.)
- Operating System (CSE301-01, Spring Sem. 2022.)

Jul. 2020 – Aug. 2020

Internship Student — DDS, Seoul, Korea
- CAD Development Team
- 3D Model Visualization
`C++  /  VTK  /  Linear Algebra  /  Geometry`

Mar. 2020 – Dec. 2020

Teaching Assistant — Dept. of Software, Gachon University, Korea
- Object-oriented Programming (09805003–4, Spring Sem. 2020.)
- Software Implementation Patterns (11494005, Fall Sem. 2020.)

PROJECTS

Sep. 2024 – Mar. 2025

Foundation model compression via knowledge distillation for mobile robots — Naver Labs Corp.
Vision Foundation Model, Knowledge Distillation, Model Compression, Representation Learning

Mar. 2022 – Jul. 2022

Development of solubility measurement technology using computer vision — (주) 디스메카, SAIT Corp.
Hubidity Detection, Machine Learning, Computer Vision

PUBLICATIONS

INTERNATIONAL CONFERENCE

Apr. 2026

SiNGER: A Clearer Voice Distills Vision Transformers Further
ICLR 2026
Geunhyeok Yu, Sunjae Jeong, Yoonyoung Choi, Jaeseung Kim, and Hyoseok Hwang

Jun. 2024

A2XP: Towards Private Domain Generalization
IEEE/CVF CVPR 2024
Geunhyeok Yu and Hyoseok Hwang

INTERNATIONAL JOURNAL

Aug. 2025

TRIDENT: Text-Free Data Augmentation Using Image Embedding Decomposition for Domain Generalization
IEEE Access, Vol. 13, pp. 139816-139830, 2025. [IF: 3.6]
Yoonyoung Choi, **Geunhyeok Yu**, Hyoseok Hwang
Keywords – Generative domain generalization, image synthesis, CLIP, latent decomposition

May. 2024

D-BADGE: Decision-based Adversarial Batch Attack with Directional Gradient Estimation
IEEE Access, Vol. 12, pp. 80770-80780, 2024. [IF: 3.9]
Geunhyeok Yu, Minwoo Jeon, Hyoseok Hwang
Keywords – Decision-based adversarial attack, universal adversarial attack, deep neural networks

Nov. 2023

Generative Perturbation Network for Universal Adversarial Attacks on Brain-Computer Interfaces
IEEE Journal of Biomedical and Health Informatics, Volume: 27, Issue: 11, 2023, [IF:7.76]
Jiyoung Jung, HeeJoon Moon, **Geunhyeok Yu**, Hyoseok Hwang
Index Term – Adversarial attack, brain computer interfaces, EEG classification, universal adversarial perturbation

Jun. 2023

Real-Time Automated Solubility Screening Method Using Deep Neural Networks with Handcrafted Features
MDPI Sensors 2023 23(12) [IF:3.847]
Minwoo Jeon, **Geunhyeok Yu**, Hyundo Choi, Gahee Kim, Hyoseok Hwang
Keywords – Solubility measurement, automated solubility screening, handcrafted feature, deep neural networks, support vector machine

SKILLS

Software

- OpenCV
- PyTorch
- Git

Research

- Scientific Methodology
- Analytic Thinking
- Teamwork and Collaboration

LANGUAGES

English ● ● ● ○ ○

Korean native