

GEUNHYEOK YU

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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 Ph.D. course in Department of Software Convergence Artificial Intelligence and Robotics Lab. supervised by Prof. Hyoseok Hwang	Yongin-si, Korea
Mar. 2022 – Feb. 2024	Kyung Hee University, Republic of Korea M.S. course in Department of Software Convergence Artificial Intelligence and Robotics Lab. supervised by Prof. Hyoseok Hwang	Yongin-si, Korea
Mar. 2018 – Feb. 2022	Gachon University, Republic of Korea B.S. course in Department of Software	Seongnam-si, Korea

EXPERIENCE

Sep. 2024 – Mar. 2025	Internship Student • Research on knowledge distillation for vision foundation model compression. Deep Learning / Knowledge Distillation / Representation Learning	Naver Labs Corp., Korea
Mar. 2022 – Present	Ph.D./M.S. Student Researcher • "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	AIRLab, Kyung Hee University, Korea
Mar. 2022 – Present	Teaching Assistant • 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.)	Dept. of Software Convergence, Kyung Hee University, Korea
Jul. 2020 – Aug. 2020	Internship Student • CAD Development Team • 3D Model Visualization C++ / VTK / Linear Algebra / Geometry	DDS, Seoul, Korea
Mar. 2020 – Dec. 2020	Teaching Assistant • Object-oriented Programming (O9805003-4, Spring Sem. 2020.) • Software Implementation Patterns (11494005, Fall Sem. 2020.)	Dept. of Software, Gachon University, Korea

PROJECTS

Sep. 2024 – Mar. 2025	Foundation model compression via knowledge distillation for mobile robots Vision Foundation Model, Knowledge Distillation, Model Compression, Representation Learning	Naver Labs Corp.
Mar. 2022 – Jul. 2022	Development of solubility measurement technology using computer vision Hubidity Detection, Machine Learning, Computer Vision	(주) 디스메카, SAIT Corp.

PUBLICATIONS

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

INTERNATIONAL CONFERENCE

Jun. 2024 **A2XP: Towards Private Domain Generalization**
IEEE/CVF CVPR, 2024
Geunhyeok Yu, Hyoseok Hwang

SKILLS

Software

- OpenCV
- PyTorch
- Git

Research

- Scientific Methodology
- Analytic Thinking
- Teamwork and Collaboration

LANGUAGES

English ● ● ● ● ●
Korean native