

# GEUNHYEOK YU

Ph.D. Student

 ghyeok.com

 Google Scholar

 +82 32 201 5570

 github.com/nda111

 geunhyeok@knu.ac.kr

 /in/ghyeok-vision

 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	<b>Kyung Hee University, Republic of Korea</b> 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	<b>Kyung Hee University, Republic of Korea</b> 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	<b>Gachon University, Republic of Korea</b> B.S. course in Department of Software	Seongnam-si, Korea

## EXPERIENCE

Sep. 2024 – Mar. 2025	<b>Internship Student</b> <ul style="list-style-type: none"><li>• Research on knowledge distillation for vision foundation model compression. Deep Learning / Knowledge Distillation / Representation Learning</li></ul>	Naver Labs Corp., Korea
Mar. 2022 – Present	<b>Ph.D./M.S. Student Researcher</b> <ul style="list-style-type: none"><li>• "Real-Time Automated Solubility Screening Method Using Deep Neural Networks with Handcrafted Features"</li><li>• "Generative Perturbation Network for Universal Adversarial Attacks on Brain-Computer Interfaces"</li><li>• "D-BADGE: Decision-based Adversarial Batch Attack with Directional Gradient Estimation"</li><li>• "A2XP: Towards Private Domain Generalization"</li></ul> PyTorch / Deep Learning / Probabilistics / Linear Algebra	AIRLab, Kyung Hee University, Korea
Mar. 2022 – Present	<b>Teaching Assistant</b> <ul style="list-style-type: none"><li>• Web/Python Programming (SWCON10400, Fall Sem. 2025.)</li><li>• Game Graphics Programming (SWCON31100, Spring Sem. 2025.)</li><li>• Reinforcement Learning (SWCON495-00, Fall Sem. 2024.)</li><li>• Web/Python Programming (SWCON104-01, Spring &amp; Fall Sem. 2023.)</li><li>• Robot Programming (SWCON331-00, Fall Sem. 2022.)</li><li>• Operating System (CSE301-01, Spring Sem. 2022.)</li></ul>	Dept. of Software Convergence, Kyung Hee University, Korea
Jul. 2020 – Aug. 2020	<b>Internship Student</b> <ul style="list-style-type: none"><li>• CAD Development Team</li><li>• 3D Model Visualization</li></ul> C++ / VTK / Linear Algebra / Geometry	DDS, Seoul, Korea
Mar. 2020 – Dec. 2020	<b>Teaching Assistant</b> <ul style="list-style-type: none"><li>• Object-oriented Programming (09805003–4, Spring Sem. 2020.)</li><li>• Software Implementation Patterns (11494005, Fall Sem. 2020.)</li></ul>	Dept. of Software, Gachon University, Korea

## PROJECTS

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

## PUBLICATIONS

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### INTERNATIONAL CONFERENCE

- Apr. 2026      **SiINGER: 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

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### Software

- OpenCV
- PyTorch
- Git

### Research

- Scientific Methodology
- Analytic Thinking
- Teamwork and Collaboration

## LANGUAGES

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**English**      ● ● ● ● ●

**Korean**      native