Jongha Kim

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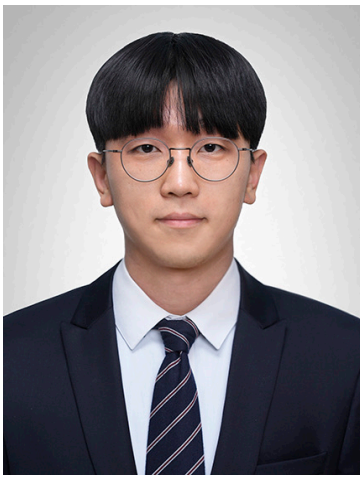
https://hytric.github.io



EDUCATION

Feb. 2019 ~ Aug. 2025 — **Inha University**, Department of Electronic Engineering, Incheon, Korea

B.S. in Electronic Engineering
GPA: 3.98 / 4.5

RESEARCH INTERESTS

- Generative model
- Multi modality
- video synthesis
- Taking face generation

RESEARCH EXPERIENCES

- Research Intern at IIP Lab (Intelligent Information Processing lab), Sogang University , Korea (Jul. 2025 ~ Present) / SCH medical domain ASR, Contextual biasing with SpeechLLM
- Research Intern at Inha University, Machine Intelligence Lab , Korea (Jan. 2024 ~ Dec. 2024) / Video synthesis , Scene graph to video generation, long video generation with diffusion
- Research Intern at Inha University, Intelligence Embedding System Lab (IESL), Korea (Jul. 2022 ~ Dec. 2022) / Computer Vision, Robotics and Autonomous Driving
- Research Intern at Research and Development Department, STS Engineering, Korea (Mar. 2025 ~ Present) / ML scientist and Embedded Engineer

PROJECTS

- Korean Audio unit translation : Multilingual hubert, transformer and vocoder, ECE Capston design, Korea / Unit inference and translate part training (Sep. 2024 ~ Present)
- Scene graph to video generation with diffusion, Machine Intelligence Lab, Korea (Aug. 2024 ~ Present)
- Analysis and Q&A on South Korean Economic Articles : Kr LLM finetuning and data preprocessing, 2024 Inha Artificial Intelligence Challenge, Korea (Jul. 2024 ~ Aug. 2024)
- Global Wildfire Detection Challenge: TransUNet, Attention U-Net, AI spark Challenge, Korea (Mar. 2024 ~ Mar. 2024)

- Model Ensemble VIT-SSD : Vision transformer and Single shot detection., ECE Deep Learning, Korea (Nov. 2023 ~ Dec. 2023)
- Real-time Computer Vision using AWS, raspberri pi, Hanium ICT, Korea (Mar. 2023 ~ Aug. 2023)
- Vision based Automous Human Following Wheeled Mobile Robot, FVE Alpha , Korea (Sep. 2022 ~ Dec. 2022)
- Future Vehicle Project(SLAM & Navigation) Roadmap, IESL, Korea (Sep. 2022 ~ Dec. 2022)
- Startup : Product Development and Branding, Gyeonggi Content Agency, Korea / 20 million won funding, business (Jan. 2023 ~ Jul. 2023)
- SeTA (Social Entrepreneurship Team Academy), SKKU, MTA Korea, Korea / Global Entrepreneurship Training Program (Mar. 2022 ~ Jun. 2022)
- TA assistant : Deep learning, Introduction to Machine Learning, Inha university, Electronic Engineering, Korea (Sep. 2024 ~ Dec. 2024)

CONFERENCES

1. Jang Ji-hye, Lee Young-jun, Heo Ji-won, Kim Jong-ha, "Development of an ROS-based Environmental Perception and Decision-making System for Indoor Autonomous Mobile Robots", Korean Society of Automotive Engineers, Jeju, Korea (Oct. 2022) - Poster

AWARDS AND HONORS

- Academic Excellence Scholarship, Inha University, Korea (Mar. 2024)
- Awarded the Encouragement Prize for the Convergence Project in the 2022-2 Semester, Inha University, Korea (Dec. 2022)
- Encouragement Award, 2022 Inha University Winter Break Job Analysis Online Competition, Inha unversity, Korea (Jan. 2023)

SKILLS AND TECHNIQUES

- Python / Linux / C / C++
- Pytorch (lightening) / Tensorflow
- SQLD, ADSP certification

GITHUB

- https://github.com/hytric
- https://hytric.github.io/
- https://hytric.github.io/project/ksae_poster/
- https://hytric.github.io/project/alpha_poster/

RESEARCH OBJECTIVE

- Academic Goals
  - Pursue graduate studies in Computer Vision and Multimodal AI with a strong foundation in machine learning, signal processing, and generative modeling.
  - Develop expertise in multimodal representation learning (Audio–Visual–Text) and its theoretical

underpinnings.

- Strengthen research methodology, collaboration, and academic communication skills to contribute to top-tier conferences (CVPR, ICCV, ICLR, NeurIPS).

- Short-term (Master's Program):
  - Advance research on Audio-to-Video Generation (Talking Head, Scene Graph to Video) using diffusion and transformer-based architectures Audio2Video_Proposal Project_portfolio .
  - Explore Lightweight Multimodal SpeechLLMs for domain-specific applications (e.g., medical ASR and Speech QA)
  - Integrate CMLab's expertise in low-level vision and generative AI to improve synchronization, realism, and efficiency in multimodal generation.
- Long-term (Career Goal):
  - Become a leading researcher in AI-based multimodal generation, pioneering methods that go beyond unimodal AI.
  - Contribute impactful research that builds AI systems capable of human-like understanding and communication across languages and modalities.