GiHoon Kim

Ph.D. Student @ Seoul National University | Diffusion / Personalization / Multimodal

gihoon.kim@snu.ac.kr | +82 10 5592 4170 | Linkedin

Highlights

- First-Author Paper (ICLR Accepted).
- Multiple Open-Source Research Repositories; One Reached **65 GitHub Stars**.
- Generative Modeling Across Diffusion, 3D/NeRF, and Audio-Driven Generation.

Research Focus

- Personalized Diffusion (Distribution Drift / Identity Consistency / Semantic Anchoring)
- Multimodal Generative Modeling (Text-to-Image / Video Generation)
- Controllable Generation, Diffusion for Inverse Problems

Publications

Preserve and Personalize: Personalized Text-to-Image Diffusion Models without Distributional Drift (Paper)
ICLR 2026 Accepted
GiHoon Kim, Hyungjin Park, Taesup Kim

Semantic Anchoring for Robust Personalization in Text-to-Image Diffusion Models (Paper)
Under review (arXiv 2025)
Seoyun Yang*, **GiHoon Kim***, Taesup Kim

NeRFFaceSpeech: One-shot Audio-driven 3D Talking Head Synthesis via Generative Prior (Paper)
CVPR Workshops 2024
GiHoon Kim, Kwanggyoon Seo, Sihun Cha, Junyong Noh

HairNeRF: Geometry-Aware Image Synthesis for Hairstyle Transfer (Paper)
ICCV 2023
Seunggyu Chang, **GiHoon Kim**, Hayeon Kim

Assessing Socio-Cultural Alignment and Technical Safety of Sovereign LLMs
Findings of EMNLP 2025
KyuByoung Chae*, **GiHoon Kim***, Gyusung Lee*, Jaejin Lee, Taesup Kim, Heejin Kim

Real-time Dynamic Hand Gesture Learning and Classification using Fuzzy ARTMAP
ICROS 2020
GiHoon Kim, WonHyong Lee

Education

Seoul National University Mar 2024 – Present
Ph.D. in Data Science, Learning Adaptation Algorithm Lab Advisor: Prof. Taesup Kim

KAIST Sep 2021 – Dec 2023
M.S. in Culture Technology, Visual Media Lab Advisor: Prof. Junyong Noh

Handong Global University Mar 2015 – Aug 2021

B.S. in Computer Science & Electronic Engineering

Republic of Korea Army Sep 2016 – Jun 2018
Sergeant Military Service: Fulfilled

Research Experience

NAVER CLOVA (Cloud) Sep 2022 – Mar 2023
Research Intern, Image/Vision

- Developed 3D-aware hairstyle transfer and 3D-consistent generative pipelines.

Deep Learning Lab Mar 2020 – Aug 2021
Student Researcher Advisor: Prof. InJung Kim

- Conducted research on super-resolution, image generation, and image segmentation.

Social Interactive Robotics Lab Oct 2019 – Feb 2020
Student Researcher Advisor: Prof. WonHyong Lee

- Designed real-time hand gesture recognition systems integrating sensors, learning, and UI.

Autonomous Driving Lab Dec 2018 – Sep 2019
Student Researcher Advisor: Prof. Kang Lee

- Developed lane detection, PID control, and ROS-based system integration.

Teaching Experience

Teaching Assistant Sep 2024 – Dec 2024
Programming Practice, Seoul National University

- Assisted programming lab sessions, grading assignments, and supporting students with Python-based programming exercises.

Teaching Assistant Sep 2019 – Dec 2020
Autonomous Driving Experiment Course

- Assisted laboratory sessions and project-based experiments across multiple semesters (2019 summer/fall; 2020 summer/fall).

Teaching Assistant Nov 2020 – Dec 2020
Adaptive Resonance Theory Algorithms for Real-Time Learning

- Supported lectures and hands-on exercises on ART-based real-time learning algorithms.

Research Code & Implementations

NeRFFaceSpeech: Audio-driven 3D Talking Head Synthesis (Github)

- One-shot audio-driven 3D talking head synthesis using a generative NeRF prior.
- Deformation-based NeRF space for modeling speech-driven facial motion from a single reference image.
- Open-source implementation (**65 GitHub stars**).

Zero-Shot Super-Resolution (Github)

- Zero-shot super-resolution without external training data.

Content-Controllable Motion Infilling (Github)

- Conditional motion infilling with controllable semantic attributes.

Audio–Image Cross-Modal Generation (Github)

- Cross-modal generation between audio and image modalities.

3D Landmark Detection (Github)

- 3D landmark detection with uncertainty modeling.

Real-Time Dynamic Hand Gesture Learning (Github)

- Real-time hand gesture learning and classification using Fuzzy ARTMAP.

Grants & Awards

Undergraduate Paper Award 2020

ICROS (Institute of Control, Robotics and Systems)

- Awarded for the paper “Real-time Dynamic Hand Gesture Learning and Classification using Fuzzy ARTMAP.”

Additional Information

- **Skills:** Generative AI, Denoising Diffusion Model, NeRF/3D vision, video generation; Python, PyTorch, C/C++, ROS
- **Languages:** Korean (Native), English (TOEIC 905)
- **Certifications:** Craftsman Information Processing; COSPRO Python Grade 1 (Highest Rating)