KUNHO KIM (김건호)

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Personal Page Github Google Scholar

EDUCATION

KAIST (Korea Advanced Institute of Science and Technology) *Mar.2022 - Feb.2024*
M.S. in Computer Science *Daejeon, South Korea*

- Advisor: Minhyuk Sung

KAIST (Korea Advanced Institute of Science and Technology) *Mar.2017 - Feb.2022*
B.S. in Electronical Engineering *Daejeon, South Korea*
Double Major in Comuputer Science

PUBLICATIONS

* denotes equal contribution
† denotes corresponding author

[1] **EditCrafter: Tuning-free High-Resolution Image Editing via Pretrained Diffusion Model**
Kunho Kim, Sumin Seo, Yongjun Cho, Hyungjin Chung
Under review

[2] **GOATex: Geometry & Occlusion-Aware Texturing**
Hyunjin Kim*, **Kunho Kim***, Adam Lee, Wonkwang Lee†
NeurIPS 2025
[Project page] [Paper]

[3] **StyleMVD: Tuning-Free Image-Guided Texture Stylization by Synchronized Multi-View Diffusion**
Kunho Kim, Sanghyeon An, Minhyuk Sung
Accepted to the ECCV CV4Metaverse 2024 Workshop but later withdrawn

[4] **As-Plausible-As-Possible: Plausibility-Aware Mesh Deformation Using 2D Diffusion Priors**
Seungwoo Yoo*, **Kunho Kim***, Vladimir Kim, Minhyuk Sung
CVPR 2024
[Project page] [Paper] [Code]

[5] **SyncDiffusion: Coherent Montage via Synchronized Joint Diffusions**
Yuseung Lee, **Kunho Kim**, Hyunjin Kim, Minhyuk Sung
NeurIPS 2023
[Project page] [Paper] [Code]

[6] **OptCtrlPoints: Optimizing Control Points for Biharmonic 3D Shape Deformation**
Kunho Kim*, Mikaela Angelina Uy*, Despoina Paschalidou, Alec Jacobson, Leonidas Guibas, Minhyuk Sung
Computer Graphics Forum (Proc. **Pacific Graphics 2023**)
[Project page] [Paper] [Code] [Video] [Slides]

AWARDS AND HONORS

Outstanding Master' s Thesis Award *Feb.2024*
KAIST, Korea

Outstanding Leadership & Service Award *Feb.2022*
KAIST, Korea

ACADEMIC SERVICE

Conference Reviewer: NeurIPS 2024, ICLR 2025, ICML 2025, NeurIPS 2025, SIGGRAPH Asia 2025, AAAI 2026, ICLR 2026
Workshop Reviewer: CVPR 2025 Multimodal Learning and Applications
Others: Pacific Graphics 2023 Presentor, Student Volunteer

WORK EXPERIENCES

NCAI, AI Researcher *Sep.2025 - now*

- Develop fashion domain specific image/video generation models (VARCO Art Fashion)

RebuilderAI, AI Researcher *Mar.2024 - Sep.2025*

- Develop a demo of a manufacturing alignment solution to validate industrial assembly workflows.
- Develop a Text-to-Panorama demo, enabling panoramic image synthesis from textual prompts.
- Develop and deploy a Text-to-3D production service.
- Develop and deploy a mesh stylization production service; authored the paper StyleMVD: Tuning-Free Image-Guided Mesh Texture Stylization by Synchronized Multi-View Diffusion (Accepted to ECCV 2024 CV4Metaverse Workshop).
- Develop an end-to-end image generation training pipeline, including custom dataset collection, annotation, and Semantic Segmentation ControlNet model training.
- Lead a project on figure manufacturing cost prediction and figure generation, overseeing research planning and model development. (Image-to-3D, Skeleton-based mesh deformation)

Mathpang, ML Engineer *Aug.2021 - Jan.2022*

- In charge of TIPS government support tasks, establishing ML pipeline (Recommendation system & NLP)

Kohyoung, Machine Intelligence Team Intern *Sep.2019 - Feb.2020*

- Develop an anomaly detection simulator through machine learning

DHive, Deep Learning Developer *Sep.2019 - Jul.2020*

- Study on object detection and automatic avoidance algorithms in UAV
- Develop an emergency situation notification system in CCTV using object detection and optical flow

RESEARCH EXPERIENCES

KAIST Visual AI Group, Undergraduate Research Intern *Dec.2021 - Feb.2022*

- Advisor: Minhyuk Sung

KAIST Urban Robotics Lab, Undergraduate Research Intern *Dec.2020 - Jun.2021*

- Advisor: Hyun Myung
- Study on the last-mile system (PCL, LiDAR, Segmentation etc.)

DataStreams, Industry-Academia Research Intern *Sep.2020 - Feb.2021*

- Advisor: Okjoo Choi
- Data to knowledge - Text data visualization with entity linking

KI4AI, Undergraduate Research Intern *Sep.2020 - Dec.2020*

- Preprocess voice data and study on the emotional TTS model using Tacotron

KAIST Robot Intelligence Technology Lab, Undergraduate Research Intern for COOP *Jul.2019 - Aug.2019*

- Advisor: Jonghwan Kim
- Study on the basic machine learning and data visualization

DHive, CUOP Intern *Jun.2019 - Aug.2019*

- Develop a modular AI prototype tool based on embedded OS using Docker – Object detection on Raspberry Pi3

KAIST NMAIL, Undergraduate Research Intern *May.2019 - Aug.2019*

- Advisor: Byunghyung Kim
- Face generation - Create realistic face that look older with deep learning

TEACHING EXPERIENCES

Teaching Assistant (CS380) Introduction to Computer Graphics, KAIST *Mar.2023 - Jun.2023*

(CS479) Machine Learning for 3D Data, KAIST *Sep.2023 - Dec.2023*

Counseling Assistant KAIST Computer Science *Sep.2023 - Feb.2024*

OTHER EXPERIENCES

FLOATIC, Outsourcing *Aug.2021*

- 3D modeling of robot logistics ware house map (Unity)

KAIST ICN Lab, Outsourcing *Feb.2021 - Mar.2021*

- Develop an interactive software app for evaluating children's cognitive abilities (Android)

KAIST App Start-up Program, Excellent Prize *Dec.2020- Apr.2021*

- Deploy the weight management app "Minimum" (Design and iOS)

Naver AI Burning Day, Advance to the Finals *Feb.2020*

- Develop the personalized AI English tutor "MAMAGO" Using Naver translated Papago API

Prography, IT union club 5th member *Sep.2019 - Feb.2020*

- Deploy the weather based AI style coordination recommendation app "FASH" (iOS)

KAIST Mad Camp, Participant *Dec.2018 - Feb.2019*

- Develop a live text editor using socket communication (Android, Java)
- Develop the rhythm game "Rhythm is life" (Unity, C#)
- Develop the racing game "Lego Racer" (Unity, C#)
- Develop a song lyrics generation system using Char-RNN model (Tensorflow, Python)

PROJECTS

CMTP, KAIST CS470 Introduction to Artificial Intelligence *Fall 2020*

- Develop a vehicle trajectory prediction model using deep learning

Zoomtopia, KAIST CS374 Introduction to HCI *Spring 2020*

- Develop the web page for short term room rental

Dropfile, KAIST CS372 Natural Language Processing with Python *Spring 2020*

- Develop the system that automatically finds the directory for new downloaded files

LEADERSHIP

Graduate Student Representative, KAIST Computer Science *Mar.2022 - Aug.2022*

Club President, KAIST Leadership Executing Team (K-LET) *Mar.2021 - Aug.2021*

SKILLS

Languages	Korean (Native), English (Middle)
Programming Languages	Python, JavaScript, C, C++, C#, HTML/CSS, Kotlin, Swift
Frameworks	Pytorch, Blender, MeshLab, Tensorflow, Docker, ReactJS