Min-Jung Kim

Ph.D. Candidate, KAIST Graduate School of AI

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RESEARCH INTEREST

I am broadly interested in computer vision, specializing in 3D and video.
My research interests include:

– Video generation with 3D understanding
– Video analysis and applications
– 3D reconstruction

but not limited to.

EDUCATION

Ph.D. Candidate, Kim Jaechul Graduate School of AI, KAIST, Korea   Sep 2021–Present
Advisors: Profs. Jaegul Choo
GPA: 4.09/4.3 (97.9/100)

M.S., Dept. of Electrical Engineering, KAIST, Korea   Feb 2012 – Feb 2014
Advisor: Prof. In So Kweon
Thesis Title: Depth Estimation for Light Field Camera using Multi-Cue Integrated Cost Volume
GPA: 3.75/4.3 (93.88/100)

B.S., Dept. of Electrical Engineering, SKKU, Korea   Mar 2008 – Aug 2011
Advisor: Prof. Tae-Yong Kuc
Graduation Project: Smart-Oriented Driving in the U-City (link to the video)
GPA: 4.1/4.5 (95.5/100) (Early Graduation)

PUBLICATION (INTERNATIONAL)

Equal contribution is denoted by "" and the correspondence is annotated with underline.*

[C10] **Min-Jung Kim***, Jeongho Kim*, Hoiyeong Jin, and Jaegul Choo, "Camera Conditioned Video Generation with Improved Pose Fidelity," *Under Review* 2025,

[C9] **Min-Jung Kim**, Dongjin Kim, Seokju Yun, Jaegul Choo "TV-LiVE: Training-Free, Text-Guided Video Editing via Layer Informed Vitality Exploitation," *Arxiv*, 2025, project page

[C8] Junha Hyung*, Kinam Kim*, Susung Hong, **Min-Jung Kim**, Jaegul Choo, "Spatiotemporal Skip Guidance for Enhanced Video Diffusion Sampling," *CVPR*, 2025, project page

[C7] Jaeseong Lee, Taewoong Kang, Marcel C. Bühler, **Min-Jung Kim**, Sungwon Hwang, JunhaHyung, HyojinJang, Jaegul Choo, "SurFhead: Affine Rig Blending for Geometrically Accurate 2D Gaussian Surfel-based Head Avatars," *ICLR*, 2025, project page

[C6] Sungwon Hwang*, **Min-Jung Kim***, Taewoong Kang, Jayeon Kang, <u>Jaegul Choo</u>, "VEGS: View Extrapolation of Urban Scenes in 3D Gaussian Splatting using Learned Priors," *ECCV*, 2024, [project page](#)

[C5] Jeongho Kim*, **Min-Jung Kim***, Junsoo Lee, and <u>Jaegul Choo</u>, "TCAN: Animating Human Images with Temporally Consistent Pose Guidance Using Diffusion Models," *ECCV*, 2024, [project page](#)

[C4] **Min-Jung Kim**, Gyojung Gu, and <u>Jaegul Choo</u>, "LensNeRF: Rethinking Volume Rendering Based on Thin-Lens Camera Model," *WACV*, 2024.

[C3] Sungwon Hwang, Junha Hyung, Daejin Kim, **Min-Jung Kim**, and <u>Jaegul Choo</u>, "Faceclipnerf: Text-driven 3d face manipulation using deformable neural radiance fields," *ICCV*, 2023.

[C2] Su Ho Han, Sukjun Hwang, Seoung Wug Oh, Yeonchool Park, Hyunwoo Kim, **Min-Jung Kim**, and <u>Seon Joo Kim</u>, "Visolo: Grid-based space-time aggregation for efficient online video instance segmentation," *CVPR*, 2022.

[C1] **Min-Jung Kim**, Tae-Hyun Oh, and <u>In So Kweon</u>, "Cost-Aware Depth Map Estimation for LYTRO Camera," *ICIP*, 2014.

WORK EXPERIENCE

Research Engineer, LG Electronics CTO Division   Feb 2014–Aug 2021

AIRSTAR Project (2017–2020)

AIRSTAR at Incheon Airport

– Real-time multi-object tracking (MOT) algorithm implementation using RGBD camera, 2D LiDAR, and odometry data. The algorithm is implemented in C++ and CUDA.

– Deployed MOT algorithm into the airport guidance robot (AirStar). AirStar has been operating since Aug 2018 at ICN Airport.

– Deplyed the MOT algorithm to Xavier board and TX2 board. (Applied TensorRT engine to accelerate.)

LGE Inference Engine Update (2015–2016)

– Add Localization Feature to the LGE inference engine, referring "OverFeat", ICLR, 2013. Implemented in C++.

– Implement a Life-logger prototype (composed of a webcam, PCB board with LGE inference engine, and battery). Demonstrate it in a portable way.

Resolving Perspective Distortion in Human Faces (2014)

– Developed a method to remove perspective distortion using a semi-spherical image plane.

Intern, System LSI, Samsung Electronics   Dec 2010 – Feb 2011
Implemented a program that converts color space in Verilog (Hardware Description Language).

HONOR & AWARD

2009–2011 **Awards**
Grand Award (Team), *25th LG Software Trainee Course* (2015).

Excellence Award (Individual) , *25th LG Software Trainee Course* (2015).
Grand Award (Team) , *SungKyunKwan Univ. Graduation Project* (2011).
2nd Place (Team), *10th KRSA robot soccer competition* (2009).

2009–2011 **Scholarships**
Samsung Talent Program Scholarship (2011).
SungKyunKwan Univ. State Scholarship, 5 out of 7 semesters (2009–2011).

ACADEMIC SERVICE

Served as a Reviewer for NeurIPS, 2025.

Student volunteer of the 11th ACCV, 2012.

TEACHING & SEMINAR

Seminar Presentations

– *From Novel View Synthesis to VEGS – HanYang Univ., March 20, 2025*

– *From NeRF to DynIBaR (Five Novel View Synthesis Paper Review) – SK Telecom, August 7, 2023*

Teaching Assistant, KAIST

– *KAIST ML Bootcamp (June 21, 2024)*

– *Electrical Circuit (Spring 2013)*

– *Data Structure (Fall 2012)*

SKILLS

Programming

– *Python, C, C++, CUDA*