

# Min-Jung Kim

Ph.D. Candidate, KAIST Graduate School of AI



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## RESEARCH INTEREST

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

but not limited to.

## EDUCATION

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**Ph.D. Candidate, Kim Jaechul Graduate School of AI, KAIST, Korea** Sep 2021–Sep 2027  
*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)

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*Equal contribution is denoted by “\*” and the correspondence is annotated with underline.*

[C10] **Min-Jung Kim\***, Jeongho Kim\*, Hoiyeong Jin, Junha Hyung, and Jaegul Choo, “Infinite-Homography as Robust Conditioning for Camera-Controlled Video Generation,” *Arxiv* 2025, [project page](#)

[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. Böhler, **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, Jaegul Choo, “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 Jaegul Choo, "TCAN: Animating Human Images with Temporally Consistent Pose Guidance Using Diffusion Models," *ECCV*, 2024, [project page](#)
- [C4] **Min-Jung Kim**, Gyojung Gu, and Jaegul Choo, "LensNeRF: Rethinking Volume Rendering Based on Thin-Lens Camera Model," *WACV*, 2024.
- [C3] Sungwon Hwang, Junha Hyung, Daejin Kim, **Min-Jung Kim**, and Jaegul Choo, "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 Seon Joo Kim, "Visolo: Grid-based space-time aggregation for efficient online video instance segmentation," *CVPR*, 2022.
- [C1] **Min-Jung Kim**, Tae-Hyun Oh, and In So Kweon, "Cost-Aware Depth Map Estimation for LYTRO Camera," *ICIP*, 2014.

## WORK EXPERIENCE

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**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.
- Deployed 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

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### 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

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*Served as a Reviewer for NeurIPS, 2025.*

*Student volunteer of the 11th ACCV, 2012.*

## TEACHING & SEMINAR

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### 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

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### Programming

- *Python, C, C++, CUDA*