

Jae-Young Kang

Ph.D. Candidate, KAIST

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EDUCATION

- **Korea Advanced Institute of Science and Technology (KAIST)** Daejeon, South Korea
• *Ph.D. in Mechanical Engineering (Advisor: Prof. Kuk-Jin Yoon)* Mar. 2025 – Present
- **Korea Advanced Institute of Science and Technology (KAIST)** Daejeon, South Korea
• *M.S. in Mechanical Engineering (Advisor: Prof. Kuk-Jin Yoon)* Sep. 2023 – Feb. 2025
- **Korea Advanced Institute of Science and Technology (KAIST)** Daejeon, South Korea
• *B.S. in Mechanical Engineering* Mar. 2019 – Aug. 2023

RESEARCH INTERESTS

- Autonomous Driving
 - End-to-End Autonomous Driving
 - Multimodal Fusion
 - Stereo Matching, Object Detection
- Event Cameras
 - Event-based Vision for Perception Tasks

PUBLICATIONS

- [1] **Jae-Young Kang***, Hoonhee Cho*, Taeyeop Lee*, Minjun Kang, Bowen Wen, Youngho Kim, Kuk-Jin Yoon. *Event6D: Event-based Novel Object 6D Pose Tracking*. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026.
- [2] Hoonhee Cho*, **Jae-Young Kang***, Yuhwan Jeong*, Yunseo Yang, Wonyoung Lee, Youngho Kim, Kuk-Jin Yoon. *DSERT-RoLL: Robust Multi-Modal Perception for Diverse Driving Conditions with Stereo Event-RGB-Thermal Cameras, 4D Radar, and Dual-LiDAR*. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026.
- [3] **Jae-Young Kang***, Hoonhee Cho*, Kuk-Jin Yoon. *Temporal Stereo Matching From Event Cameras Via Joint Learning With Stereoscopic Flow*. IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2025.
- [4] Hoonhee Cho*, **Jae-Young Kang***, Giwon Lee*, Hyemin Yang*, Heejun Park, Seokwoo Jung, Kuk-Jin Yoon. *VR-Drive: Viewpoint-Robust End-to-End Driving with Feed-Forward 3D Gaussian Splatting*. Conference on Neural Information Processing Systems (NeurIPS), 2025.
- [5] **Jae-Young Kang***, Hoonhee Cho*, Kuk-Jin Yoon. *Unleashing the Temporal Potential of Stereo Event Cameras for Continuous-Time 3D Object Detection*. IEEE/CVF International Conference on Computer Vision (ICCV), 2025.
- [6] Hoonhee Cho*, **Jae-Young Kang***, Youngho Kim, Kuk-Jin Yoon. *Ev-3DOD: Pushing the Temporal Boundaries of 3D Object Detection with Event Cameras*. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2025. **Highlight (Top 3.0%)**.
- [7] Hoonhee Cho, **Jae-Young Kang**, Taewoo Kim, Yuhwan Jeong, Kuk-Jin Yoon. *Unifying Low-Resolution and High-Resolution Alignment by Event Cameras for Space-Time Video Super-Resolution*. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2025.
- [8] Hoonhee Cho*, **Jae-Young Kang***, Kuk-Jin Yoon. *Temporal Event Stereo via Joint Learning with Stereoscopic Flow*. European Conference on Computer Vision (ECCV), 2024.

SKILLS

Programming: Python, C++, MATLAB

Frameworks: PyTorch, ROS

Languages: Korean (Native), English (Fluent)

RESEARCH PROJECTS

- 비정형 야지 환경 자율주행을 위한 핵심 기술 개발 (Core Technologies for Autonomous Driving in Unstructured Off-road Environments): Hanwha Aerospace Feb. 2026 – Present
- 강건한 자율주행을 위한 데이터 증강 및 센서 융합 기술 개발 (Data Augmentation and Sensor Fusion Techniques for Robust Autonomous Driving): 42dot Dec. 2024 – Jan. 2026
- 감시·정찰·수색 임무용 사족보행 로봇 시스템 기술개발 (Quadrupedal Robot System for Surveillance, Reconnaissance, and Search Missions): Agency for Defense Development (ADD) Sep. 2023 – Oct. 2024

AWARDS

- **Qualcomm Innovation Fellowship Korea (QIFK) Finalist, 2025:** Selected as a finalist for innovative PhD-level research proposals by Qualcomm.
- **CVPR Highlight (Top 3%), 2025:** Ev-3DOD recognized as a Highlight paper at CVPR 2025.

ACADEMIC SERVICE

- **Conference Reviewer:** CVPR 2026, ECCV 2026

TEACHING EXPERIENCE

- **Teaching Assistant, Autonomous Mobile System Programming:** KAIST *Sep. 2025 – Dec. 2025*
- **Teaching Assistant, Samsung AI Expert Program:** Samsung Electronics *Sep. 2025 – Nov. 2025*
- **Teaching Assistant, Introduction to Visual Intelligence:** KAIST *Mar. 2025 – Jun. 2025*