Yoonki Cho

Postdoctoral Researcher @ KAIST

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SUMMARY

I am a **Postdoctoral Researcher at KAIST** (*Technical Research Personnel until Feb. 2027*), where I focus on **multimodal embedding models**, **retrieval-augmented generation (RAG)**, and **agentic search**. My current work investigates multimodal evidence retrieval and iterative search strategies for RAG and agentic systems. My previous research has also covered **robust representation learning**, **efficient inference**, visual retrieval, and graph-based re-ranking. My work has been published at top-tier AI venues, including NeurIPS, CVPR, and AAAI, and has received 500+ citations, with my open-source research code collectively earning 100+ GitHub stars.

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) — *South Korea*

Ph.D. in Computer Science — *Mar. 2021 - Feb. 2026*

- **Thesis: Robust Representation Learning and Efficient Inference for Visual Retrieval**
- Advisor: Prof. Sung-Eui Yoon

Korea Advanced Institute of Science and Technology (KAIST) — *South Korea*

M.S. in Computer Science — *Mar. 2019 - Feb. 2021*

- Advisor: Prof. Sung-Eui Yoon

Korea University — *South Korea*

B.S. in Computer Science — *Mar. 2015 - Feb. 2019*

PUBLICATIONS

[12] EvBS: Event-guided Blur Synthesis for Domain-adaptive Motion Deblurring
Junsik Jung, Seokryun Choi, **Yoonki Cho**, Woo Jae Kim, Andrew Jeong, Sung-eui Yoon
ACM International Conference on Multimedia (ACM MM), 2026

[11] Class-Relational Approach for Visual Place Recognition under Extreme Appearance Changes
Jaeyoon Kim, **Yoonki Cho**, Sung-Eui Yoon
IEEE Robotics and Automation Letters (RA-L), 2026

[10] Towards Test-time Efficient Visual Place Recognition via Asymmetric Query Processing
Jaeyoon Kim*, **Yoonki Cho***, Sung-Eui Yoon (*: equal contributions)
AAAI Conference on Artificial Intelligence (AAAI), 2026

[9] Learning Event-guided Exposure-agnostic Video Frame Interpolation via Adaptive Feature Blending
Junsik Jung, **Yoonki Cho**, Woo Jae Kim, Lin Wang, Sung-Eui Yoon
British Machine Vision Conference (BMVC), 2025

[8] AegisRF: Adversarial Perturbations Guided with Sensitivity for Protecting Intellectual Property of Neural Radiance Fields
Woo Jae Kim, Kyubeom Han, **Yoonki Cho**, Youngju Na, Junsik Jung, Sooel Son, Sung-Eui Yoon
British Machine Vision Conference (BMVC), 2025

[7] Pinpointing Trigger Moment for Grounded Video QA: Enhancing Spatio-temporal Grounding in Multimodal Large Language Models
Jinhwan Seo, **Yoonki Cho**, Junhyug Noh, Sung-Eui Yoon
The 3rd Perception Test Challenge @ ICCV Workshop, 2025 (**Winner - Grounded VideoQA**)

[6] Towards Robustness of Person Search against Corruptions
Woojung Son, **Yoonki Cho**, Guoyuan An, Chanmi Lee, Sung-Eui Yoon
IEEE/CVF International Conference on Computer Vision (ICCV), 2025

[5] Enhancing Visual Re-ranking Through Denoising Nearest Neighbor Graph via Continuous CRF
Jaeyoon Kim, **Yoonki Cho**, Taeyoung Kim, Sung-Eui Yoon
IEEE International Conference on Image Processing (ICIP), 2025 (**Spotlight**)

[4] Generalizable Person Re-identification via Balancing Alignment and Uniformity
Yoonki Cho, Jaeyoon Kim, Woo Jae Kim, Junsik Jung, Sung-Eui Yoon
Conference on Neural Information Processing Systems (NeurIPS), 2024

[3] Feature Separation and Recalibration for Adversarial Robustness
Woo Jae Kim, **Yoonki Cho**, Junsik Jung, Sung-Eui Yoon
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023 (**Highlight**)

[2] Part-based Pseudo Label Refinement for Unsupervised Person Re-identification
Yoonki Cho, Woo Jae Kim, Seunghoon Hong, Sung-Eui Yoon
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2022

[1] RCIK: Real-Time Collision-Free Inverse Kinematics Using a Collision-Cost Prediction Network
Mincheul Kang, **Yoonki Cho**, Sung-Eui Yoon
IEEE Robotics and Automation Letters (RA-L), 2022

AWARDS & HONORS

- **Outstanding Ph.D. Thesis Award**, School of Computing, KAIST, 2026
- **Outstanding Reviewer**, CVPR, 2026
- **Winner (1st Place)**, Grounded VideoQA at the 3rd Perception Test Challenge, Google DeepMind, 2025
- **National Government Scholarship**, Korea Government, 2019–2025
- **Cheongho Scholarship**, Cheongho Cultural Foundation, 2017–2018
- **Science Talent Scholarship**, Korea University, 2015–2016

INDUSTRY COLLABORATIONS

Deep Generative Model for Texture Atlas Generation and Restoration *NAVER LABS*
Main Developer *Apr. 2022 - Jun. 2023*
- Developed differentiable rendering–based image-to-image translation methods for digital twin construction

Robust Person Re-identification in Changing Environments *ISC, KAIST*
Project Lead & Main Developer *Jul. 2021 - Dec. 2023*
- Managed & developed robust person re-identification methods for real-world surveillance systems

Line Detection and Semantic Line Matching *SK Telecom*
Main Developer *Oct. 2019 - Apr. 2020*
- Developed line detection & semantic line matching methods for multi-view image registration in digital twin construction

Face Recognition for Traveler Screening and Casino Access Control *National Forensic Service*
Research Assistant *Jul. 2017 - Dec. 2017*
- Developed virtual face generation methods for traveler screening and unauthorized casino entry detection

TEACHING & SERVICE

- **Teaching Assistant**: AI Expert Course (Vision & Algorithm), Samsung Electronics, 2023–2024
- **Academic Reviewer**: CVPR (2023-2026), ICCV (2025), ECCV (2026), NeurIPS (2025-2026), AAAI (2025-2027), IEEE TNNLS, IJCV, etc.