Seokju Cho Ph.D. Student

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Intro.

I am a PhD student at KAIST, advised by Prof. Seungryong Kim. My main research interest is general video perception, especially Track Any Point (point tracking) and vision-language understanding, and their applications to 3D/4D perception and reconstruction. I am closely working with Joon-Young Lee and Gabriel Huang at Adobe through a couple of internships, and before that, I collaborated with Google Research and Microsoft Research Asia (MSRA).

Education

Korea Advanced Institute of Science and Technology (KAIST) Seoul, Korea
Integrated M.S./Ph.D. in Artificial Intelligence 2024 - 2027 *(expected)*

Korea University Seoul, Korea
Integrated M.S./Ph.D. in Computer Science and Engineering 2022 - 2024
- Transferred to KAIST with supervisor (degree incomplete).

Yonsei University Seoul, Korea
B.S. in Computer Science 2018 - 2022

Internships

NVIDIA Research | Santa Clara, CA, USA 2025.06 - 2025.08 (Expected)

Adobe Research | San Jose, CA, USA 2024.06 - 2024.09
- Mentors: Gabriel Huang, Joon-Young Lee
- Worked on 3D point tracking, aiming to understand 3D structure from 2D trajectory; paper accepted to CVPR 2025.

Adobe Research | San Jose, CA, USA 2023.06 - 2023.09
- Mentors: Joon-Young Lee, Gabriel Huang
- Conducted research on long-range dense tracking, leading to the publication of 'Revisiting Optical Flow for Long-Range Dense Tracking' at CVPR 2024.

Publications

1. **Seokju Cho**, Jiahui Huang, Seungryong Kim, and Joon-Young Lee, "Seurat: From Moving Points to Depth",
IEEE Conference on Computer Vision Pattern Recognition (**CVPR**), **Highlight**, 2025.

2. Inès Hyeonsu Kim*, **Seokju Cho***, Jiahui Huang, Jung Yi, Joon-Young Lee, and Seungryong Kim, "Exploring Temporally-Aware Features for Point Tracking",
IEEE Conference on Computer Vision Pattern Recognition (**CVPR**), 2025.

3. Kihong Kim*, Yunho Kim*, Seokju Cho, Junyoung Seo, Jisu Nam, Kychul Lee, Seungryong Kim, and KwangHee Lee, "DiffFace: Diffusion-based Face Swapping with Facial Guidance",
Pattern Recognition (**PR**), 2025.

4. Sangbeom Lim*, Seongchan Kim*, Seungjun An*, **Seokju Cho**, Paul Hongsuck Seo, Seungryong Kim, "Multi-Granularity Video Object Segmentation",
AAAI Conference on Artificial Intelligence (**AAAI**), 2025.

5. Heeseong Shin, Chaehyun Kim, Sunghwan Hong, **Seokju Cho**, Anurag Arnab, Paul Hongsuck Seo, Seungryong Kim, "Towards Open-Vocabulary Semantic Segmentation Without Semantic Labels",
Neural Information Processing Systems (**NeurIPS**), 2024.

6. **Seokju Cho**, Jiahui Huang, Jisu Nam, Honggyu An, Seungryong Kim, and Joon-Young Lee, "Local All-Pair Correspondence for Point Tracking",
European Conference on Computer Vision (**ECCV**), 2024.

7. **Seokju Cho**, Jiahui Huang, Seungryong Kim, and Joon-Young Lee, "FlowTrack: Revisiting Optical Flow for Long-Range Dense Tracking",
IEEE Conference on Computer Vision Pattern Recognition (**CVPR**), 2024.

8. **Seokju Cho**[*], Heeseong Shin[*], Sunghwan Hong, Anurag Arnab, Paul Hongsuck Seo, and Seungryong Kim, "CAT-Seg: Cost Aggregation for Open-Vocabulary Semantic Segmentation",
IEEE Conference on Computer Vision Pattern Recognition (**CVPR**), **Highlight**, 2024.

9. Sunghwan Hong[*], **Seokju Cho**[*], Seungryong Kim, Stephen Lin, "Unifying Feature and Cost Aggregation with Transformers for Dense Correspondence",
International Conference on Learning Representations (**ICLR**), 2024.

10. Jiuhn Song[*], Seonghoon Park[*], Honggyu An[*], **Seokju Cho**, Min-Seop Kwak, Sungjin Cho, and Seungryong Kim, "DäRF: Boosting Radiance Fields from Sparse Inputs with Monocular Depth Adaptation",
Neural Information Processing Systems (**NeurIPS**), 2023.

11. Jihye Park[*], Sunwoo Kim[*], Soohyun Kim[*], **Seokju Cho**, Jaejun Yoo, Youngjung Uh, and Seungryong Kim, "LANIT: Language-Driven Image-to-Image Translation for Unlabeled Data",
IEEE Conference on Computer Vision Pattern Recognition (**CVPR**), 2023.

12. Junyoung Seo[*], Gyuseong Lee[*], **Seokju Cho**, Jiyoung Lee, Seungryong Kim, "MIDMs: Matching Interleaved Diffusion Models for Exemplar-based Image Translation",
AAAI Conference on Artificial Intelligence (**AAAI**), 2023.

13. **Seokju Cho**[*], Sunghwan Hong[*], Seungryong Kim, "CATs++: Boosting Cost Aggregation with Convolutions and Transformers",
IEEE Trans. on Pattern Analysis and Machine Intelligence (**TPAMI**), 2023.

14. Sunghwan Hong, Jisu Nam, **Seokju Cho**, Susung Hong, Sangryul Jeon, Dongbo Min, and Seungryong Kim, "Neural Matching Fields: Implicit Representation of Matching Fields for Visual Correspondence",
Neural Information Processing Systems (**NeurIPS**), 2022.

15. Sunghwan Hong[*], **Seokju Cho**[*], Jisu Nam, Stephen Lin, Seungryong Kim, "Cost Aggregation with 4D Convolutional Swin Transformer for Few-Shot Segmentation",
European Conference on Computer Vision (**ECCV**), 2022.

16. **Seokju Cho**[*], Sunghwan Hong[*], Sangryul Jeon, Yunsung Lee, Kwanghoon Sohn, Seungryong Kim, "CATs: Cost Aggregation Transformers for Visual Correspondence",
Neural Information Processing Systems (**NeurIPS**), 2021.

Awards and Honors

- **Google East Asia Student Travel Grants for CVPR,** 2024.06
- **3rd Place Award in AI Online Competition**, Ministry of Science and ICT & National IT Industry Promotion Agency, *Won 300M KRW*, 2023.05

Skills

Languages: Korean (Native), English (Professional).
Programming: , , .

Academic Services

Reviewers for: CVPR (2023, 2024, 2025),
ECCV (2024),
NeurIPS (2023).